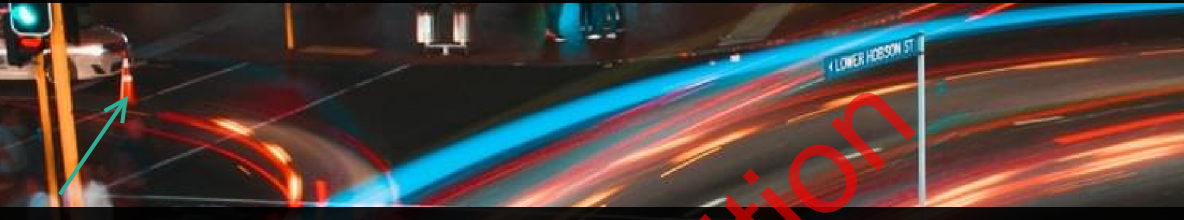
Includes BEV forecast to 2030

Q1 2023

European Electric Car Monthly Market Intelligence

Edition 2023:03 | Delivering direction behind Western Europe's plug-in new car market



Healthy BEV volumes unable to maintain plug-in progress on PHEV drop

Plug-in penetration of the West European passenger car market remains stuck at 24.7% on a 12-month rolling basis for the third consecutive month

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Covers Western Europe's 18 Markets: EU Member States prior to the 2004 enlargement, plus EFTA markets Norway, Switzerland, Iceland, plus UK – accounting for over 95% of the enlarged European region's BEV total volumes

In this report: BEV = Battery Electric Vehicles, PHEV = Plug-in Hybrids, PEV/NEV = BEV+PHEV (plug-in EV)

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Executive Summary

Second highest new BEV passenger car registrations on record - Yet price-cuts (Tesla), forecast downgrades (UK) and slow BEV subsidy uptake (Netherlands) still offer signs of caution.

With 214,882 new BEV passenger car registrations recorded across the 18 market West European region in March, it translated to the second-highest monthly BEV volumes month on record and a BEV new car market mix of 16.6% in a market that is seeing thick order books provide an initial healthy looking facade, where macroeconomic headwinds continue to batter it from behind.

March's high volumes were second only to the perennial end-of-year boost month of December, where during the final month of 2022, 270,603 (27.1% BEV delivery mix) new BEVs entered the market as OEMs traditionally deliver high BEV volumes to secure EU 27-wide (plus Iceland and Norway) CO2 fleet average targets. During 2022 an extra anomaly helped boost volumes further, achieving over 0.25 million BEVs for the only time, thanks to several individual markets adjusting purchase or fiscal subsidies downwards from the following year. March is traditionally the strongest month of the year for the total regional passenger car market, irrespective of drivetrain, thanks to the twice-yearly registration plate changeover in the **UK** boosting volumes. However, as the UK sees its BEV market penetration grow on the back of attractive benefit-in-kind benefits for the company car market, BEV private purchase subsidies were cancelled last year. The company car market which accounted for just over half of the total passenger car market during Q1 2023 according to industry SMMT data, is seeing company cars account for closer to 75% share of pure BEV new registrations. However, with private demand dwindling, the UK's automotive association has downgraded their expected 2023 BEV market share mix forecast from 19.7% to 18.4%, pointing the finger at *"high energy costs and insufficient charging infrastructure."*

The UK was the number one BEV volume market across the 18-market monitored West European region during March with 46,626 new BEV registrations, accounting for just over every fifth (21.7%) BEV delivered across the region. Its BEV mix penetration was stable (+0.1ppt y/y) at 16.2% in March (15.4% Q1). **Tesla** led the way accounting for almost every fourth (22.5%) BEV entering UK roads in March, while it was the success of **SAIC**'s **MG** that stood out, accounting for 12% of all new pure electric models entering UK roads, which was ahead of **VW**'s share (7.4%). In fact, the **UK now leads the entire region in terms of Chinese OEM models** entering its roads. First quarter data shows that every twentieth (4.9%) new passenger car entering UK roads came from a Chinese brand, irrelevant of drivetrain, or 24,452 units, which contributed more than every third Sino-model entering the W-European region during this year's opening quarter's total (69,627) and double the regional Sino market penetration mix (2.4%). This suggests that the UK is becoming the most accepting market for Chinese auto brands. With **BYD** and **GWM (ORA)** about to begin their UK market roll-outs, this is likely to expand further, while just under half (3,500) of all West European **Polestar** deliveries (7,300) landed on UK roads this year. MG now has a higher UK total new passenger car market share (4.2%) than incumbents such as **Škoda** (3.4%), **Peugeot** (3.0%), **Renault** (1.7%) or **Fiat** (1.2%) and just 0.4 ppts behind **Vauxhall (Opel).** MG is also likely helped in the UK – the brand's spiritual home – giving critical brand equity. However, looking towards other markets, Sino-brands, with the exception of MG and Geely's Polestar, appear more apparent for their absence. **NIO**, having entered the European market in August 2021, solely in Norway, progressed poorly with less than 1% share of the Norwegian BEV market this year, providing worrying signs for the brand as established brands bring more BEV models to market. The Norwegian market also carries an advantage for Chinese imports as it doesn't apply a 10% EU import tariff to Chinese new cars. However, a handful of its new ET5 model, currently being launched in Europe, only managed to boost NIO's West European total volumes to less than 500 units this year, or under half the amount of **Ferrari**'s total volumes across the region, as a comparison. The ET5 starts at €47,500 in Germany, but that is with *batteries not included*. A further €12,000 has to be added for the smallest 75kWh battery or an additional €9,000 (€21,000) for the 100kWh unit. The entry-level Tesla Model 3, with batteries included,

MG 4, a top-10 regional BEV, sees models waiting to be shipped to Europe.

currently begins at €41,990, indicating NIO's uphill task. Both are available with delivery times of between 1-4 months. With Tesla in its European ramp-up stage, Musk, commenting during the company's Q1 results call, said they are happy to forego profit over volume currently. This is a strategy which most incumbent OEMs have been attempting to race away from over the previous few years.

Meanwhile, during the **Mercedes** first quarter results call, CFO Harald Wilhelm confirmed price stability is expected from the Stuttgart-housed manufacturer, however, he also confirmed that the **European order-in-take remains sluggish** with order books propping up the market for now. In a reversal of Tesla, Mercedes have said they are happy to sacrifice volume to save pricing in the future, protecting residual values, a crucial part of their business model. Also, commenting on the US **IRA** fiscal subsidy programme, set to see the US BEV market come alive, there could be consequences for the European market in terms of limited supply. Non-qualifying US IRA fiscal rebates for cars manufactured outside of the US or not having suitable local content can be circumnavigated through lease vehicles. Rather than selling their BEVs as private vehicle sales, offering them through lease deals puts them into the commercial vehicle category and, thus, qualifies them for IRA benefits. If this loophole is fully realised and US demand for BEVs rises, Europe could begin to see a supply headwind in 2024 once again. Meanwhile **Volvo Cars** gave some insightful granularity on its BEV profitability during its Q1 results call, indicating that the profit margin of its BEV versions of its XC40/C40 (Q1 2023: 19,000 BEVs across Western Europe), which saw its combined West European volumes surpass that of the Tesla Model 3 (18,700 -42% y/y) – having hit a wall with the Model Y (70,500 +170.2%y/y) cannibalisation – achieve 7% profit margin during the opening quarter. Both Volvo models are still based on a multi-drivetrain platform (CMA), which indicates margins could be even higher in this sector on BEV-dedicated platforms, while further lithium price falls this year are expected to see margins rise further according to Volvo. Its **Geely** platform sharing scaling benefits are also likely contributing to this, enabling it to bring a lower-segment BEV to model to market. The new model will be debuted later this year and will likely be based on the same SEA architecture as the **Smart** #1 (50/50 Geely/Mercedes JV). Also offering some granularity on margins during its Q1 results call, **BMW** is forecasting a BEV profit margin corridor of 8-10% this year from its pure electric models.

While backorders keep the market in good shape during the opening quarter, more turbulent seas await the European BEV market as we head into the year's second half, perhaps best indicated by the Dutch slower than expected uptake in purchase subsidies with more than half of its annual BEV budget still up for grabs. Strong new deliveries appear to be from last year's orders.■

BY MANUFACTURER BEV market share Q1 2023

TESLA – 21.9%

Tesla's 12-month rolling regional BEV market share continued its upward ascent, seeing it achieve 16% in the period from April 2022 to March 2023, which notably includes a turbulent second half last year impacted by China's zero-Covid impact and shipping delays to Europe, suggesting the current 261,100 run rate underplays its recent progress which saw 91,700 new deliveries during the opening quarter of 2023. With European production rates increasing, Tesla's 2023 West European deliveries are well on course to surpass 300,000. As a result, they are more likely to achieve around 330,000 units in 2023, giving a 20% share of the 2023 total BEV market or over 3% share of the total market. However, the Model Y's success appears to be hurting the Model 3 according to the latest data, with a year-on-year first quarter increase of 170% for the Model Y to 70,500 units while Model 3 volumes fell by -41.7% y/y to 18,700. Second and third-quarter losses are expected to narrow on weak volumes last year on Chinese covid strains.

VOLKSWAGEN GROUP – 21.1%

Accounting for every fifth new BEV entering the region's passenger car market this year, the Group consists of BEV offerings from **VW, Audi, ŠKODA, SEAT/Cupra** and **Porsche**, witnessed a 3.2 percentage point gain in market share over the same quarterly period last year. Second-quarter volume gains are expected to increase steeply on low second-quarter volumes last year as the automaker was hardest hit by wire harness stoppages at a key Ukrainian facility. This should be factored in to the 12-month rolling total which rose to 373,800 but with that anomaly taken out of the equation is likely to be closer to in excess of 400,000 units this year. Regarding sectors, VW's **ID.3 new volumes (8,400) surpassed ID.4 volumes (8,250) for the first time since November 2021**. It was also the ID.3's fifth-best month since the model began deliveries in September 2020. Facelift deliveries will begin to dealers in June and customers in Autumn, while production of the model is also set to begin at its Wolfsburg plant. **ID.3 won't feature an LFP battery for now, VW confirmed to us**. Meanwhile, **Audi** launching a refreshed version of the e-tron – badged Q8 – saw 23,500 BEV deliveries from all three models (Q4, Q8 and e-tron GT) during the opening 3-months, making it the highest-ranked German premium brand when it comes to BEVs. These made up 14.0% of Audi's regional total volumes this year. However, during the same period, on a global scale, and irrespective of drivetrain, Tesla's volumes (422,875) surpassed Audi's (415,684). Audi will begin production of the 800V PPE-based Q6 model later this year, offering a direct rival to Tesla's Model Y. Deliveries will begin in early 2024 Audi confirmed to this report.

STELLANTIS – 12.2%

The combined BEV volumes of **Peugeot, Citroën, DS, Opel/Vauxhall** and **Fiat** resulted in Stellantis being firmly stuck in third position while seeing a 2 percentage point fall in market share over the same time last year to 12.2%. **Jeep**'s Avenger arriving Q2 will add momentum to an ageing line-up.

RENAULT/NISSAN ALLIANCE – 8.8%

The patchy Alliance now has below 10 per cent BEV market share, with its 12-month rolling total to the end of March 2023 falling to 10.4%. Megane E, with prices beginning at the same price point as Tesla's Model Y and are exposed to Tesla price drops as well as the **Nissan** Ariya SUV that has had production issues dampening its full market rollout. With Tesla delivery times of 1-3 months, any further hold-up at Nissan could hurt. During 2018 the Franco-Japanese Alliance accounted for 39% of the total regional BEV market. However, **Dacia**'s Chinese-manufactured Spring remains resilient and faces little competition, seeing 12,100 Q1 regional deliveries ahead of **Renault**'s Meganne E (10,400). The model is the Alliance's top BEV, in volume terms, despite not being available in all markets, such as Norway, Sweden, Iceland and right-hand-drive markets. Dacia accounted for 33% of the Alliance's BEV volumes this year, which was more than double Nissan's contribution (6,000).

HYUNDAI/KIA – 7.5%

Hyundai/Kia was a major main loser, with its 12-month rolling share of the regional BEV market tumbling to 8.6% up to the end of March from 11.7% at the same time last year. During the opening three months, its share of the BEV new car markets fell 6.3 percentage points to 7.5% from 13.8% at the same time last year, with volumes falling by -28% y/y. A **Kia** investor relations presentation shows that the Korean duo is currently focussing more on BEV profitability than BEV volume however.

ASIAN OEMs – 17.7%

Norway continued to provide signs of promise for a Japanese brand for the first time since the Leaf dominated during the last decade. In March, the **Toyota** BZ4X was Norway's second-most-registered BEV model for the second consecutive month. Toyota/Lexus also saw BEV volumes surpass those of its PHEV model during the opening quarter. Combined regional **Mazda**, **Nissan**, Toyota/Lexus, **Subaru**, and **Honda** models achieved 12,700 BEV units in Q1, improving by 30.6% y/y and bringing its quarterly market share to 3%, or almost equal to last year (3.1%). Asian OEMs accounted for just under every fifth (17.7%) new BEV.

GERMAN PREMIUM – 19.3%

Mercedes-Benz Group (inc. Smart) and **BMW Group** (inc. MINI) continue to see PHEV models play a large part in achieving CO_2 compliance. At the same time, the gap to BEVs appears to be narrowing, with PHEVs accounting for 58% of Mercedes' plug-in model registrations during the opening quarter and just 55% over at BMW. BMW's BEV volumes (21,300) remained behind **Audi**'s (23,500), while Mercedes trailed with 19,450 BEVs during the same period. **Porsche** had the highest premium plug-in mix (BEV/PHEV) mix of its total regional volumes this year, with 35% fitted with a plug. The Stuttgart-based company is heavily exposed to Malus markets. In France, a maximum tax of €50,000 is due on vehicles that emit over 225g/km.

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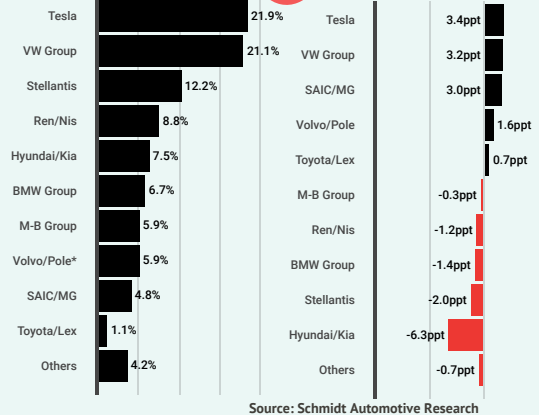
Fig. 23.03/01: W-Europe BEV Market Share | Q1 2023 Y/y Ppt. change



Source: Schmidt Automotive Research

Fig. 23.03/02: W-Europe BEV Monthly Registrations 12-Months Rolling Trend

Source: Schmidt Automotive Research

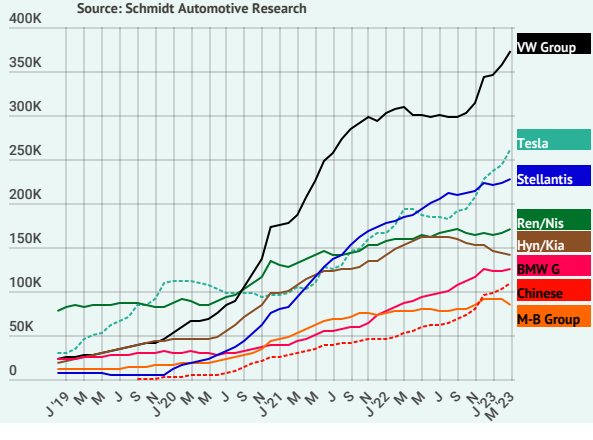
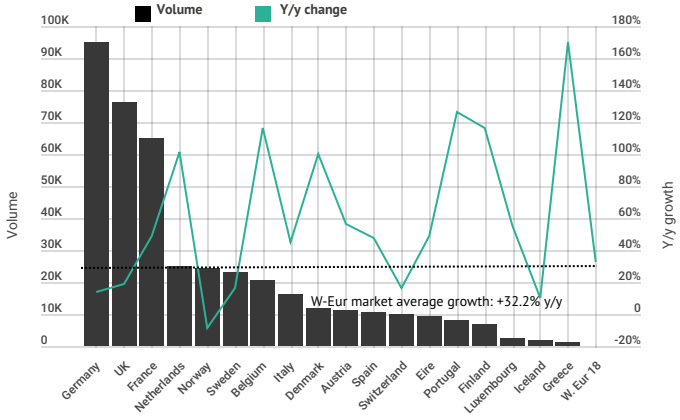


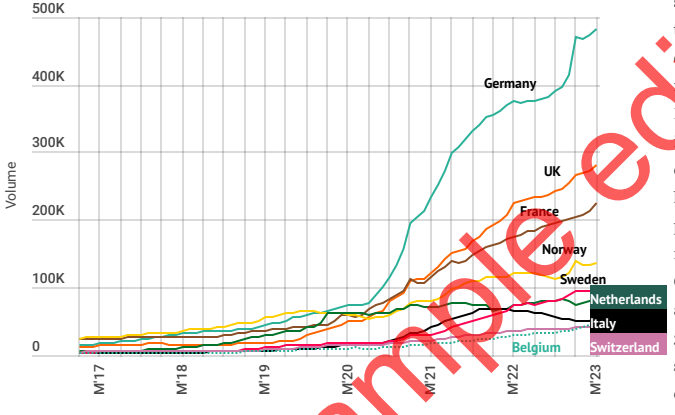
Fig. 23.03/12: W-European BEV Registrations and y/y Change Q1 2023



Source: Individual national trade associations, Schmidt Automotive Research

Fig. 23.03/13: W-Europe BEV Passenger Car Registrations 12-Month Rolling Trend

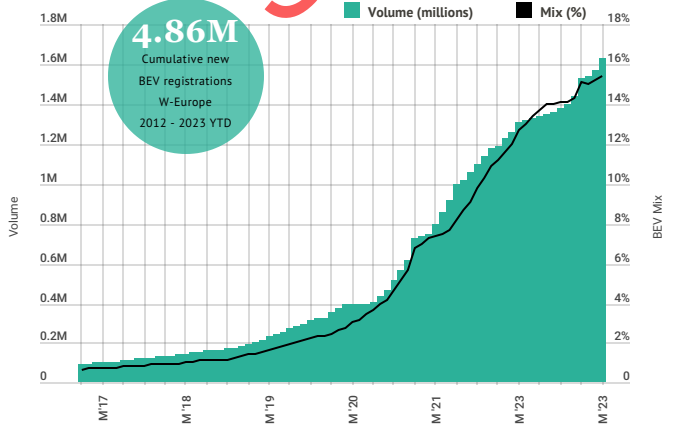
CY 2016 - Last 12-months rolling – Top 9 Largest Rolling Markets



Source: Schmidt Automotive Research

Fig. 23.03/14: W-Europe BEV Passenger Car Registrations and Mix – 12-Month Rolling Totals

CY 2016 - Last 12-months (rolling)



BY MARKET

The **UK**, boosted the regional market in March thanks to its biannual registration plate changeover, causing market boosts in March/September, resulting in it being the region's largest BEV market in March with 46,626 (16.2% BEV mix) or accounting for 21.7% of the total region's BEV volumes. Its growth rate was just 18.6% y/y however, in a region that saw volumes increase by double that pace (42.9%), boosted by strong gains in **The Netherlands** (+132.9%), **Belgium** (149.2%) and **Denmark** (156.3%). During the opening quarter, it was a similar picture, with UK growth rising by 18.8% and the region by 32.2%, boosted by the same markets all seeing triple figure first quarter year-on-year gains. In early May, The SMMT, the UK's auto association, revised its BEV market penetration forecast for 2023 downwards, from 19.7% BEV market penetration in a 1.79 million market to 18.4% in a 1.83 million market, putting high energy costs and poor infrastructure to blame. However, in terms of volumes, that would only be a slight BEV volume adjustment from an original 352,630 total to a revised 336,720 target. 2022 BEV volumes stood at 267,200, which would mean volume growth of 26%y/y this year. Germany continues to lead the way in 2023 cumulative volume terms, seeing 94,736 new pure electric models enter its roads this year and seeing its 12-month rolling BEV new car registrations total approach half a million, which it is expected to achieve by as early as May given the low volumes during the end of last year's first half on Ukrainian wire-harness headwinds. **France**, the region's third largest BEV new passenger car market accounting for 15.5% of the region's total new first quarter volumes, or 64,859 according to CCFA/AVERE data, saw its volumes growth increase by an above regional average of 49.1%, while the total region rose by 32.2%y/y. France continued to see entry-level Small and Budget sector models account for almost half of its new BEV volumes in one of the only major North European markets that see price-conscious private consumers dominate the market with little fiscal help on offer for company car drivers. This makes it all the more puzzling why the likes of BYD or Great Wall Motors aren't targetting the French market with their entry-level BEV models up until now. In terms of the highest growth markets, **The Netherlands**, which sees a €2,950 government-supplied purchase subsidy available from a €67 million budget this year, accounting for roughly 23,000 new vehicles, grew by 101.4% y/y during Q1. However, only €20 million of that budget had been used up to the end of April, or more than half remaining. During 2022 the entire budget was exhausted by June. **Beglium** on a company car fiscal adjustment being phased-in during 2023, and **Denmark**, also witnessed gains of 116% and 100% increases, respectively, or a doubling in volumes. **Germany** continued to see volume growth (13.2% y/y) at less than half the regional average (32.2%). ■

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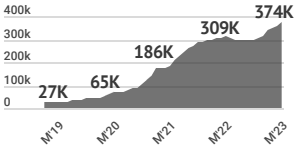
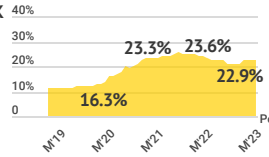
Source: Schmidt Auto Research

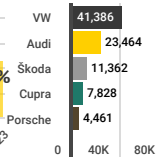
VW Group 12-month rolling volume



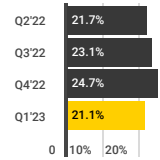
12-month BEV market share



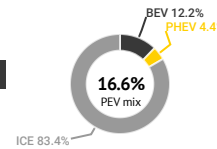
Brand split YTD 2023



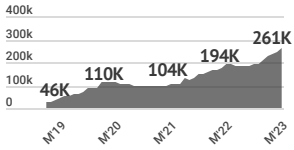
BEV Mkt share (%)



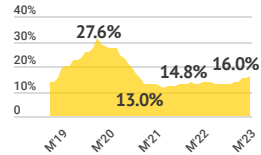
Drive split YTD 2023 (%)



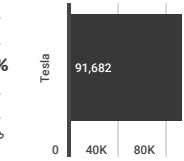
Tesla 12-month volume



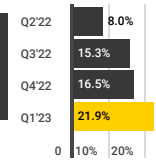
12-month BEV market share



Brand split YTD 2023

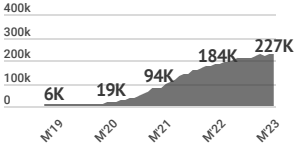


BEV Mkt share (%)

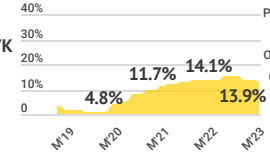


Drive split YTD 2023 (%)

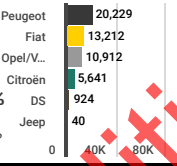
Stellantis 12-month rolling volume



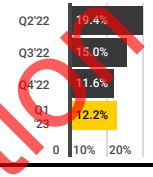
12-month BEV market share



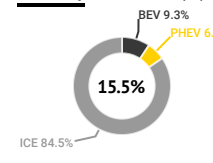
Brand split YTD 2023



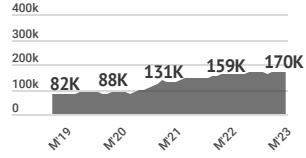
BEV Mkt share (%)



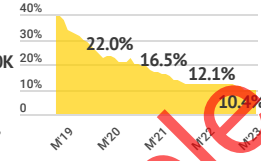
Drive split YTD 2023 (%)



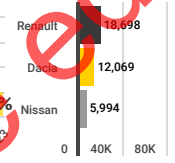
Ren/Niss/Dacia 12-month rolling volume



12-month BEV market share



Brand split YTD 2023



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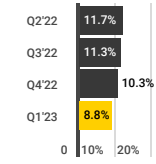

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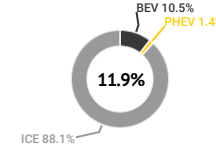
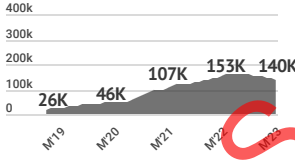
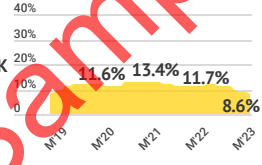


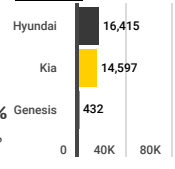
Hyundai/Kia 12-month volume



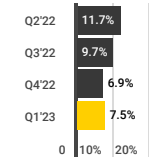
12-month BEV market share



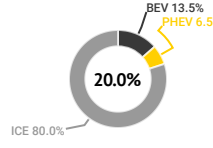
Brand split YTD 2023



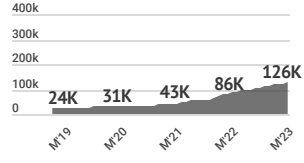
BEV Mkt share (%)



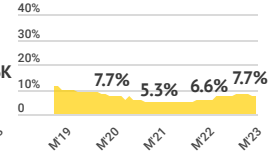
Drive split YTD 2023 (%)



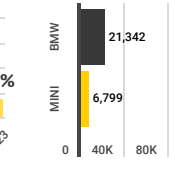
BMW Group 12-month volume



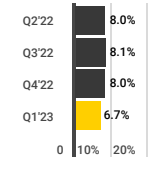
12-month BEV market share



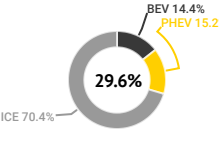
Brand split YTD 2023



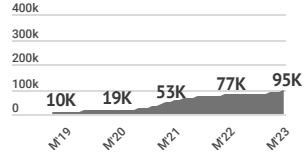
BEV Mkt share (%)



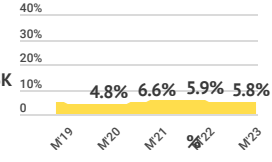
Drive split YTD 2023 (%)



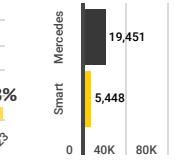
M-B Group 12-month volume



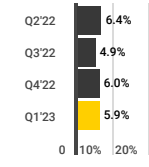
12-month BEV market share



Brand split YTD 2023



BEV Mkt share (%)



Drive split YTD 2023 (%)