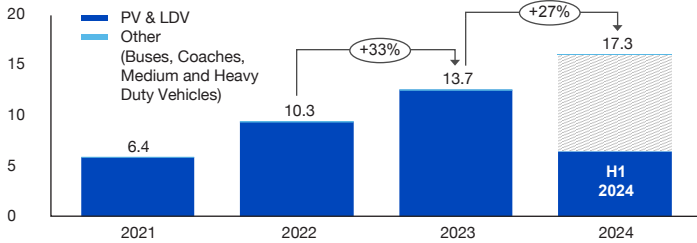


QUARTERLY COBALT MARKET UPDATE OVERVIEW 2024 Q3

EV MARKET: GLOBAL SALES CONTINUE TO CLIMB

EV sales by segment

Million units



Source: Benchmark, Rho Motion. Note: PV - Passenger Vehicle, LDV - Light Duty Vehicle



The first half of 2024 saw weaker than expected EV sales, although some slowdown in growth is to be expected given historical unsustainable growth rates. EV sales in H1 reached 7 million units, a year-on-year increase of 21% – even this weaker than expected growth remained in the double digits. The second quarter saw strong improvements on Q1, namely in China, where quarterly EV penetration rates surpassed 40% for the first time, with a YoY increase in unit sales of 31% in H1.



Outside China, growth has been lacklustre, particularly in some European countries, resulting in H1 growth of 2% in the region. The EU has experienced a YoY decline in sales for 2 months in 2024, albeit with a recent recovery. Sales grew by 10% in North America in H1.

EV MARKET: COBALT-CONTAINING CHEMISTRIES REMAIN KEY IN THE US AND EU



Top 10 EV models sold in the US, 2024 year to date

Rank	Model	Chemistry	Type
1	Tesla Model Y	NCA	BEV
2	Tesla Model 3	NCA	BEV
3	Jeep Wrangler 4xe	NCM 523	PHEV
4	Tesla Model 3	LFP	BEV
5	Hyundai Ioniq 5	NCM 811	BEV
6	Rivian R1S	NCA	BEV
7	Ford Mustang Mach-E	NCM 712	BEV
8	Jeep Grand Cherokee 4xe	NCM 523	PHEV
9	Toyota RAV4	NCM 622	PHEV
10	Tesla Cybertruck	NCM 811	BEV



Source: Benchmark, Rho Motion. Note: PV - Passenger Vehicle, LDV - Light Duty Vehicle



Top 10 EV models sold in the EU, 2024 year to date

Rank	Model	Chemistry	Type
1	Tesla Model Y	NCM 811	BEV
2	Volvo EX30	NCM 622	BEV
3	Audi Q4 e-tron	NCM 712	BEV
4	Tesla Model 3	NCM 811	BEV
5	Skoda Enyaq iV	NCM 712	BEV
6	Volvo XC60	NCM 523	PHEV
7	Volkswagen ID.3	NCM 712	BEV
8	Volkswagen ID.4	NCM 712	BEV
9	MG-4	NCM 622	BEV
10	BMW iX1	NCM 622	BEV



POLICY: PROTECTIONISM GROWS AGAINST CHINA-MADE EVS



Measures: 100% import tax on Chinese EVs.

In H1 2024, less than 0.2% of EVs sold in the USA were made in China. The share of Chinese-made EVs sold in the USA is declining from a high of 1.2% in 2022. Polestar is the only major marque that will be significantly impacted by the measures. Prior to the tariff's announcement, Polestar had already announced that it would manufacture the Polestar 3 in South Carolina from mid-2024.



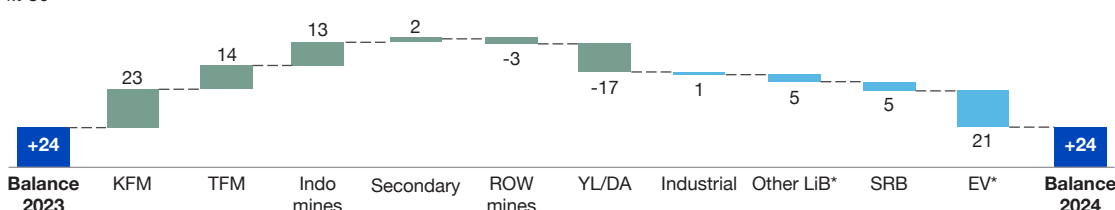
Measures: Implemented provisional countervailing tariffs on Chinese-made BEVs. The current 10% import tariff rises to 47.6%, 30.8%, 29.9% or 27.4%, depending on the OEM.

While a significant proportion of Chinese-made BEVs sold in Europe remain Teslas, the presence of Chinese OEMs in Europe is growing. With the introduction of tariffs, many Chinese OEMs (BYD, Leapmotor, Chery, Dongfeng, SAIC, Zeekr, and Xiaopeng) are looking to build out EV capacity in Europe as they continue to target Europe as a region within which to grow.

MARKET BALANCE: INCREASED OUTPUT FROM KISANFU AND WEAKER EV DEMAND WILL LEAVE THE MARKET IN LARGER OVERSUPPLY IN 2024

Cobalt market balance, 2023 vs 2024

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Supply changes
Demand changes

Notes: YL/DA = yield losses and disruption allowance;

*EV and Other lithium ion batteries (LiB) are adjusted for supply chain lags.

Please do not hesitate to get in touch if you have any questions:

Market analysis prepared by Benchmark Mineral Intelligence

