

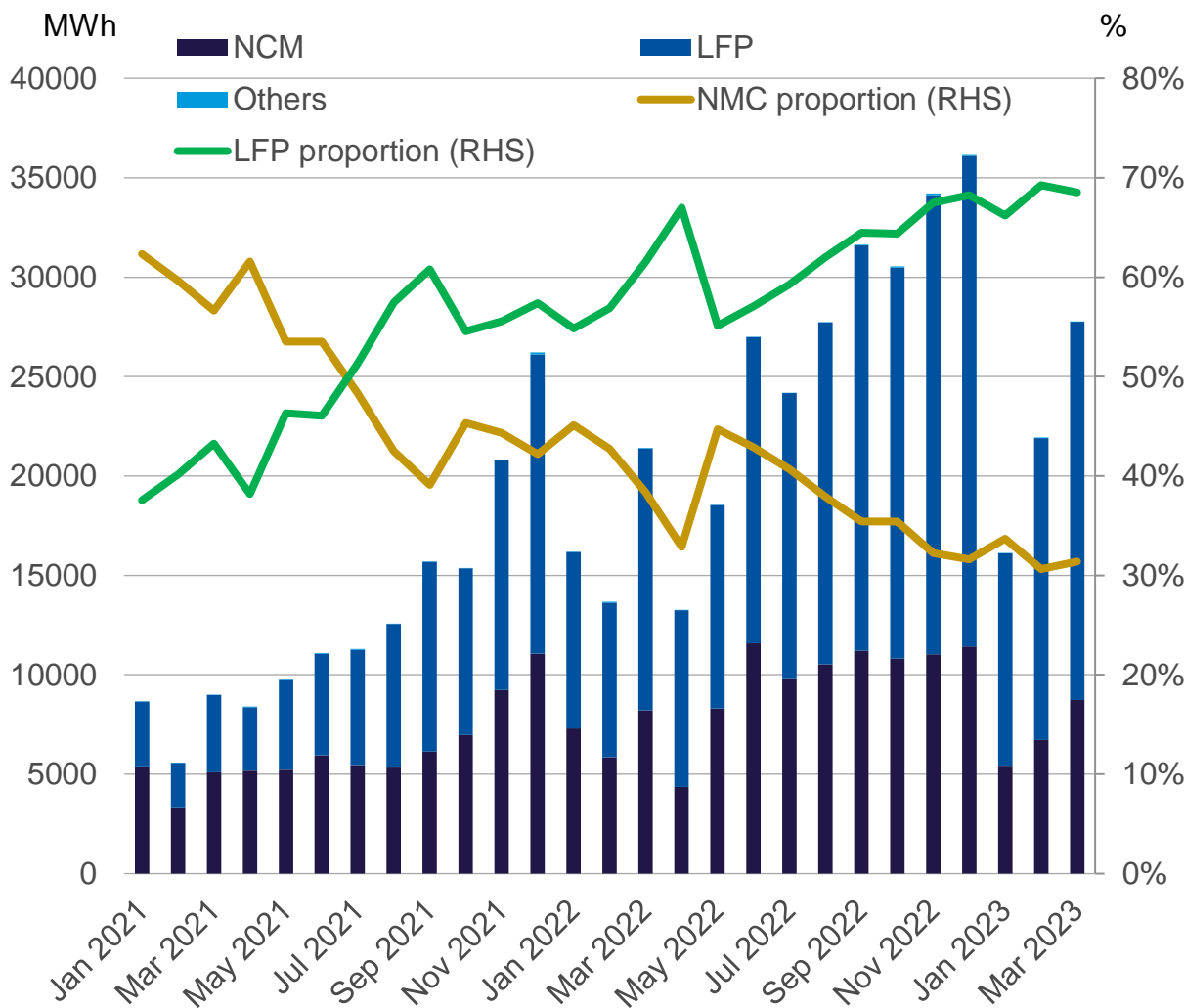


**Changes in cobalt market are leading
to the new pricing mechanism**

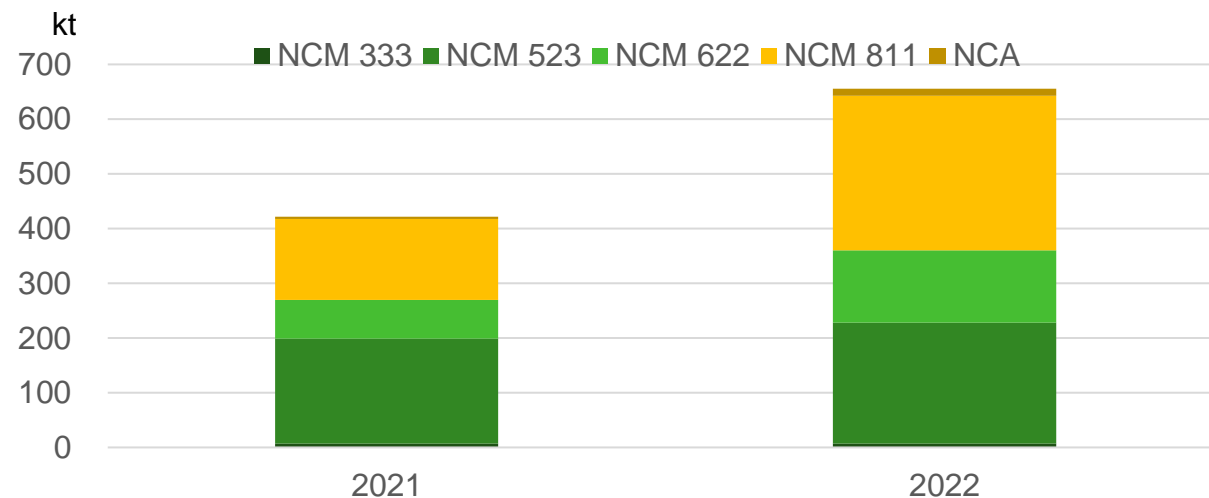
**Cobalt congress 2023
Istanbul, Turkey**

LFP and high nickel content battery are gaining more market share in China, which has affected cobalt demand

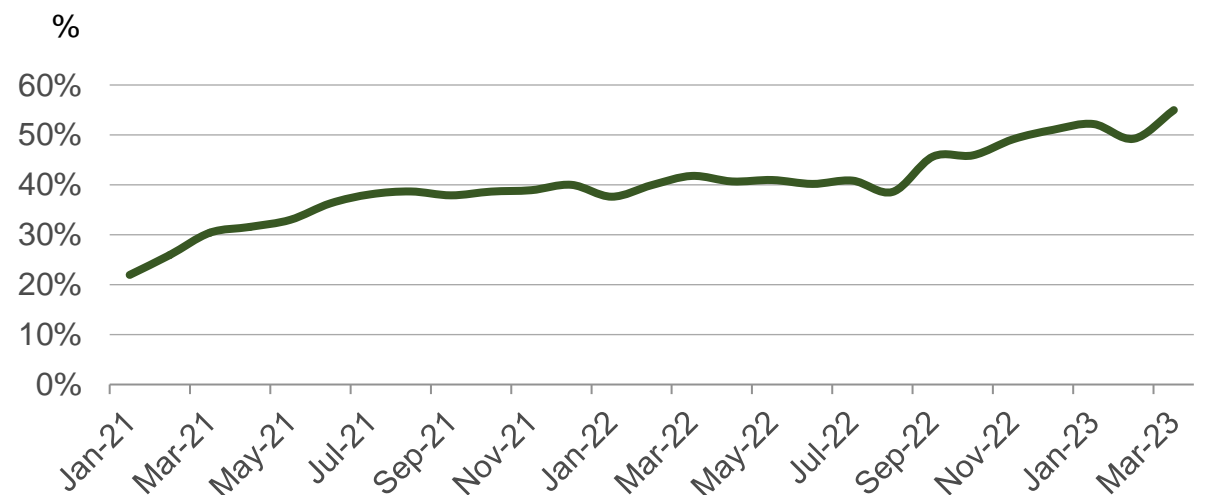
China's lithium-ion battery output by type



China's ternary cathode materials output

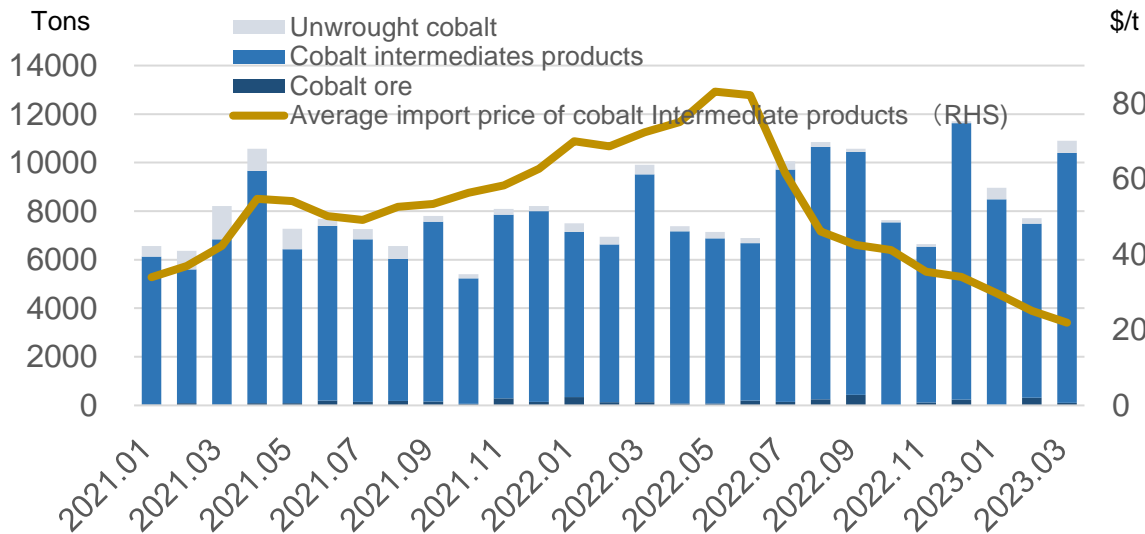


NCM 811 proportion of ternary cathode materials output in China

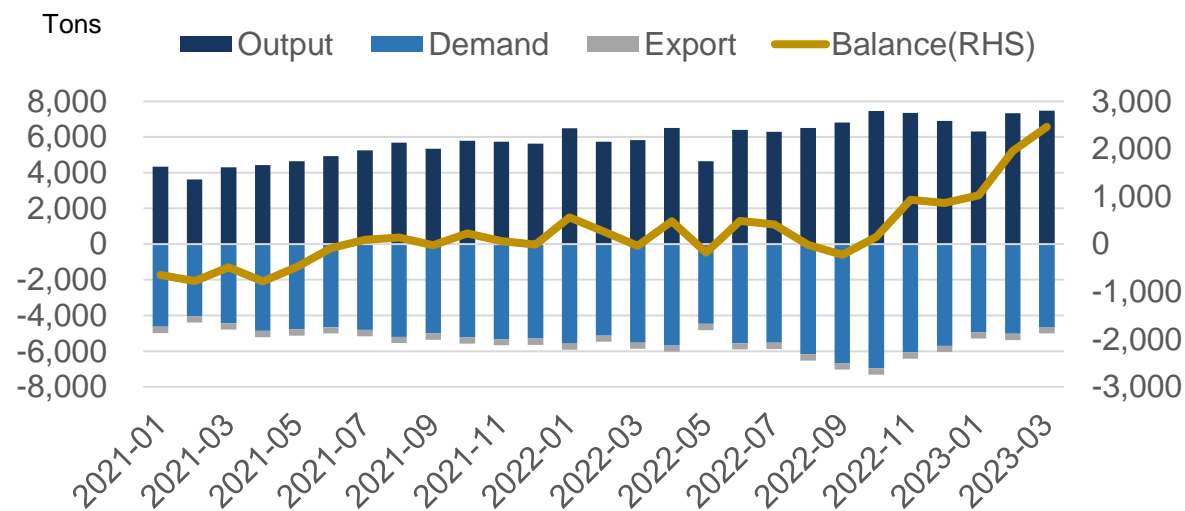


Cobalt sulfate has its own market situation rather than in line with refined cobalt due to the booming EVs industry

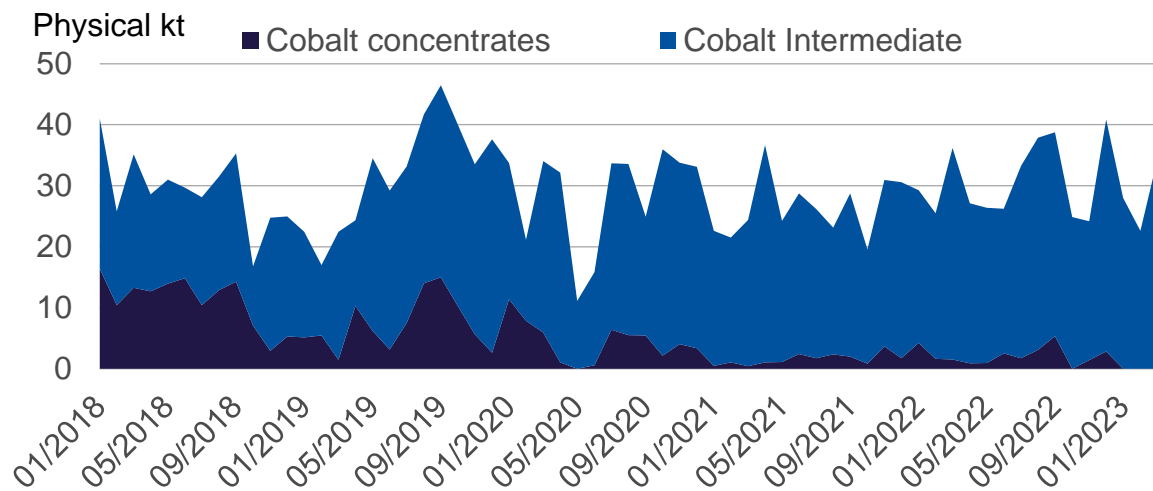
China's cobalt products imports (metal content)



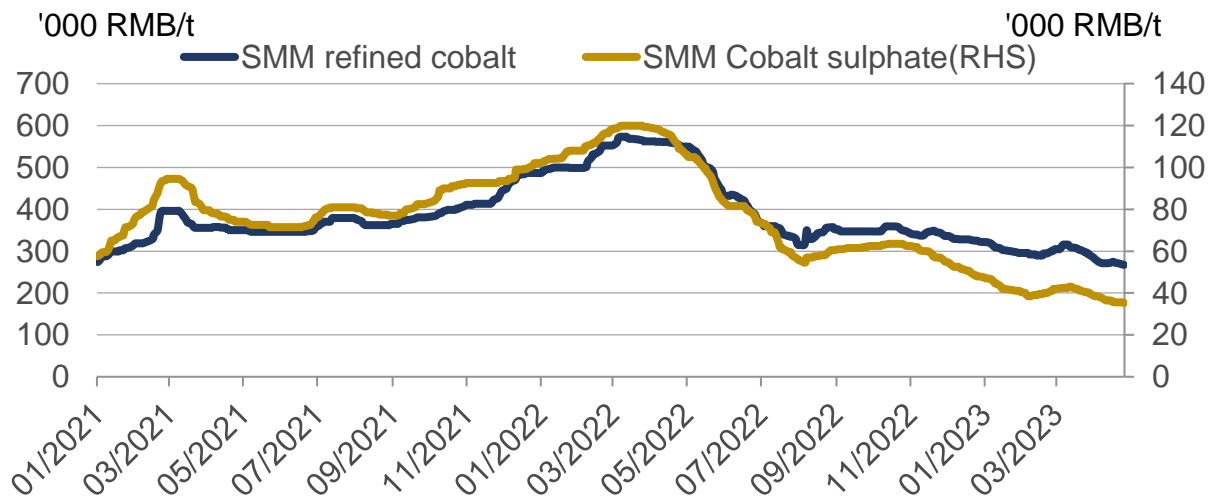
Cobalt sulfate market balance in China



Cobalt imports from DRC

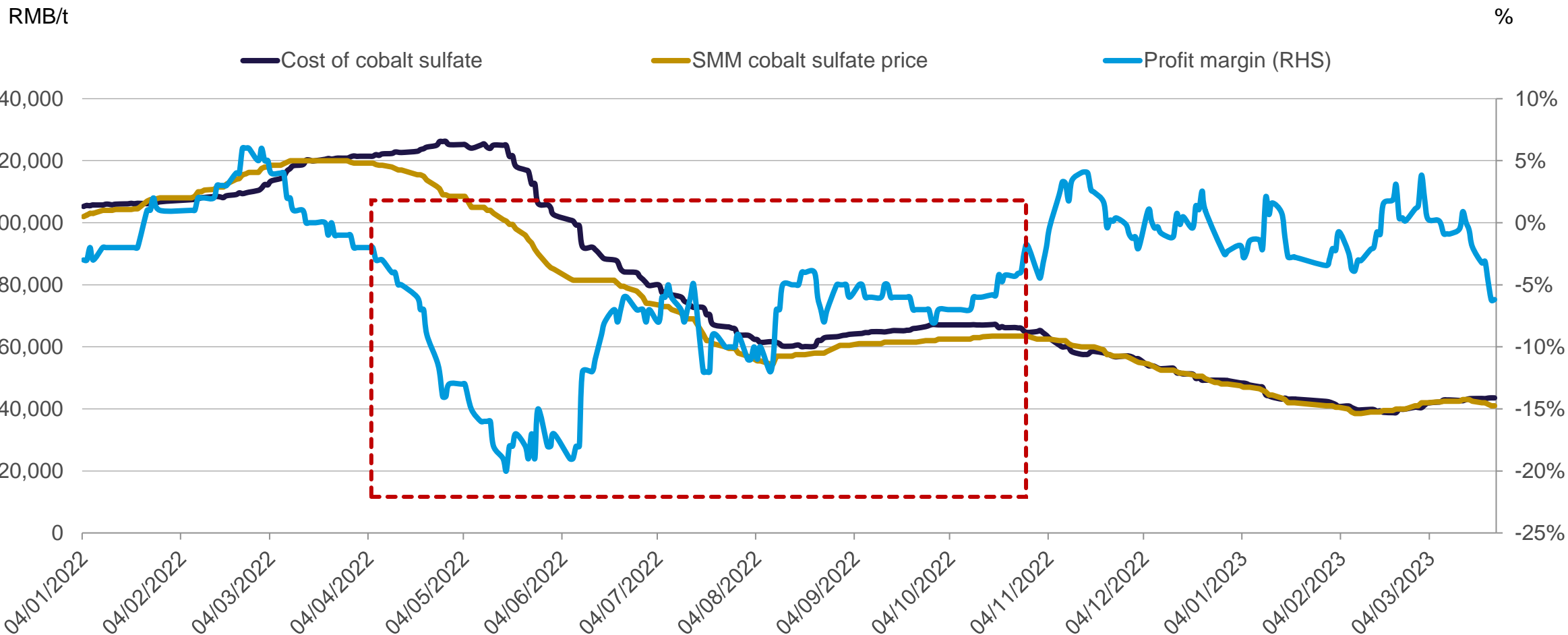


Refined cobalt and cobalt sulfate prices in China



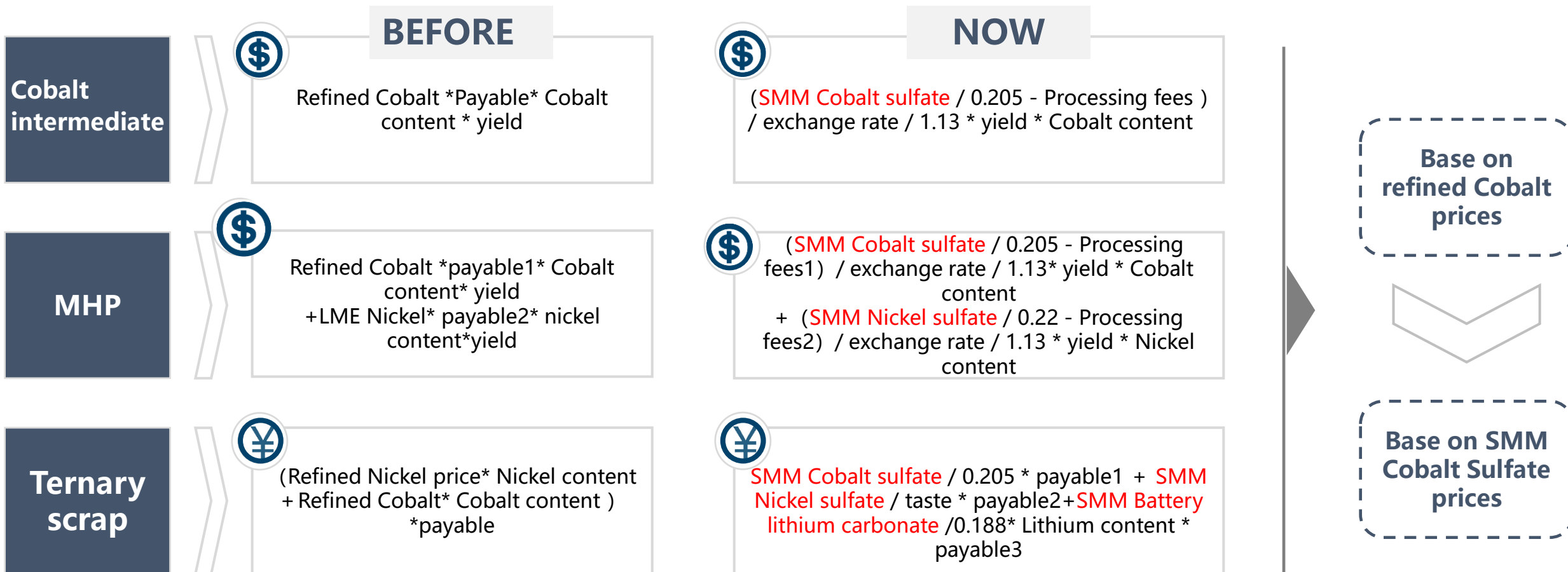
Price gap between raw materials and products for CoSO₄ producers in 2022 led to huge loss, reasonable pricing mechanism is required

Profit margin of cobalt sulfate producers who buy raw materials based on refined cobalt prices and sell cobalt sulfate at SMM prices in China



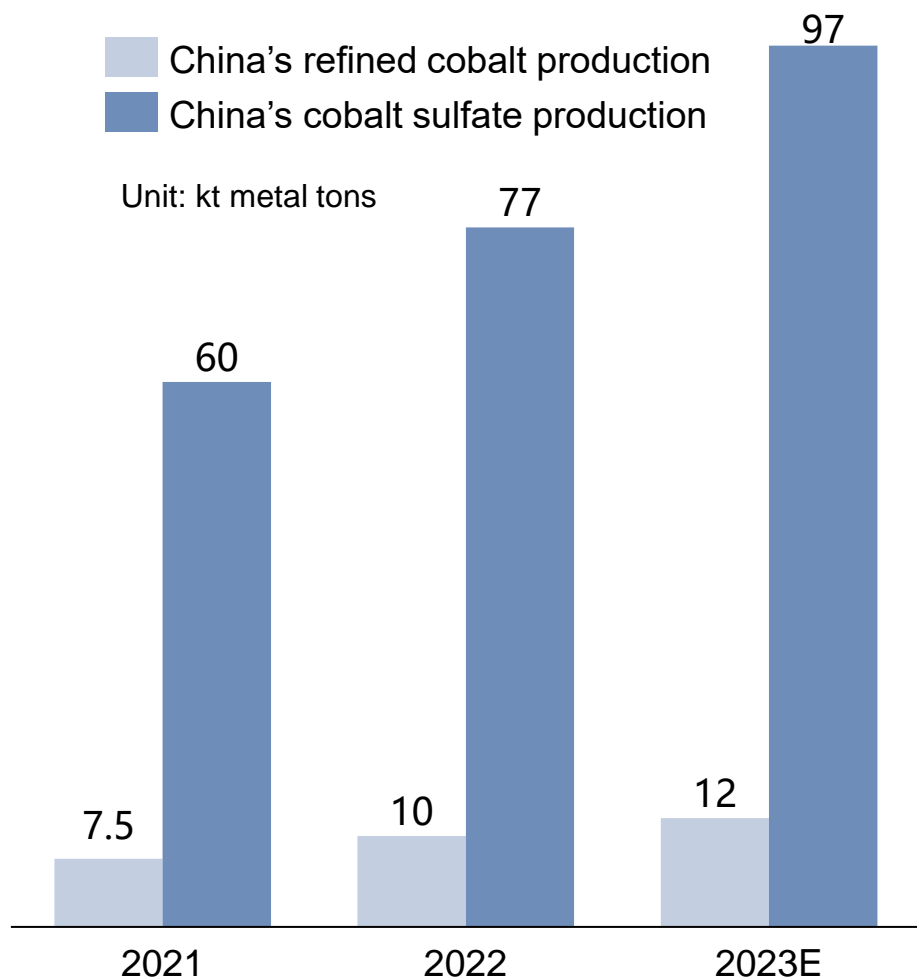
Innovation in the pricing mechanism of cobalt intermediate raw materials

Cobalt intermediate raw material price settlement mechanism and related parameters

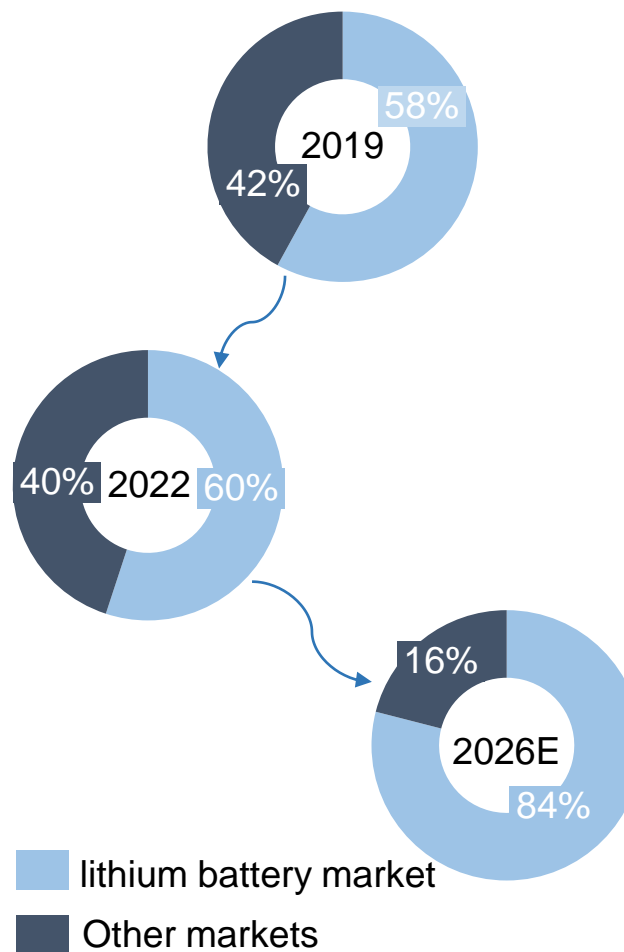


The advantages of pricing mechanism based on cobalt sulfate price —more practical and effective

Comparison of refined cobalt and cobalt sulfate production in China (2021-2023E)



Changes in the proportion of downstream market of cobalt intermediate products (2019-2026E)



- It is irrational to determine the price of cobalt sulfate, which accounts for a larger market share, by the price of refined cobalt, which has a smaller market share.
- From the perspective of raw material flow and production cost composition, pricing cobalt intermediate products at the price of cobalt sulfate can reasonably reflect the cobalt market.

Thanks

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ABOUT SMM

