

Negative lithium sentiment continues as we approach the midpoint of 2024. Early in the year I was telling clients that I thought sentiment would turn positive before the fourth quarter but I have pushed that back to “sometime” in 2025. From my perspective, there are multiple factors negatively impacting attitudes towards and investment in the lightest metal.

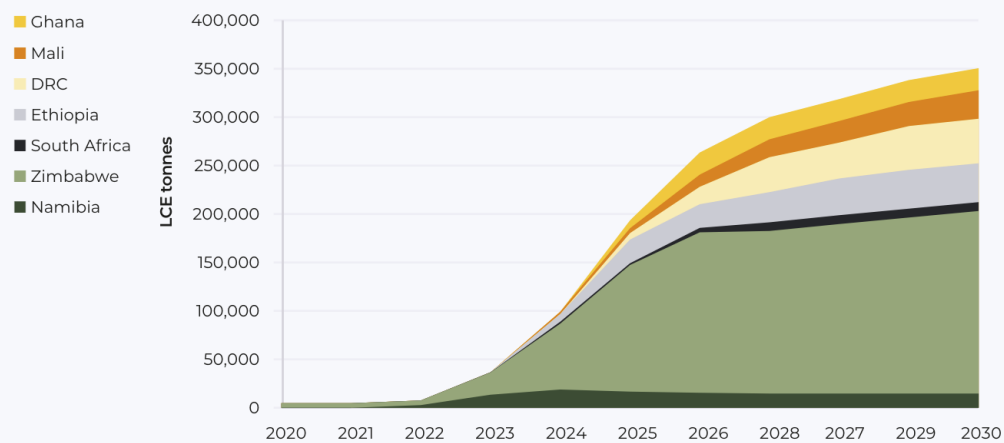
**1) China has done a great job of responding to the price bubble of 2022 by leveraging their domestic lepidolite and sourcing both sustainable and unsustainable material from across Africa. They continue to push the “oversupply” narrative to keep prices down.**

The net result is a China spot price for lithium carbonate that currently hovers in a USD equivalent range between \$13 and \$14 per kg. Vertically integrated battery producers have every reason to produce lithium chemicals from lepidolite at a loss if the extra volume can keep the spot price near current levels and discourage western companies from investing. There would be more damage to their bottom line if they shut down domestic capacity and spodumene prices rose to a level where the resulting lithium chemicals rose to prices in the mid to upper 20s (or higher).

China’s gift for adapting quickly has created a false impression believed by many that the current spot price is sufficient to keep the market oversupplied. Investment by western lithium majors and juniors has slowed down dramatically yet many of the delayed projects remain unchanged in Investment Bank supply and demand models. The law of unintended consequences will ultimately come into play when global demand for lithium moves from ~ 1 million tons of LCE in

### African lithium output growth will be driven by Zimbabwe

By 2030 Africa will produce 15% of the world’s lithium according to Benchmark’s Lithium Forecast. Production from Zimbabwe will central to the ramp up in Africa’s output, accounting for over 50% of the continent’s output in 2030.



Source: Benchmark’s Lithium Forecast

**2023 to more than 2 million sometime in the next three or four years and touches**

**3 million or more in 2030. Benchmark Mineral Intelligence forecasts Africa will produce 375K MT by 2030. The sharp increase in LCEs from Africa largely funded by China is not sufficient to keep China in control of the lithium price indefinitely. Even China's lithium leader, Ganfeng, says it will take longer to develop lithium resources in Africa longer than people think. The longer price stays below the western lithium company incentive price of the low \$20s (something ALB, UBS and I agree on); the more significant the future price spike will be. In that scenario, China will have lost the "lepidolite lever" to quickly bring price back down. Why? They will be fully utilizing their domestic resources.**

**If we are currently in a massive oversupply and lepidolite cost is as low as some Investment Banks believe, why is the spot price so much higher now than in 2020? An even better question is why is SQM's price more than double their 2020 quarterly low? I believe SQM remains the best global indicator of price. You can also ask why spodumene hasn't returned to anywhere near the lows of 2020. Unanswered questions abound.**

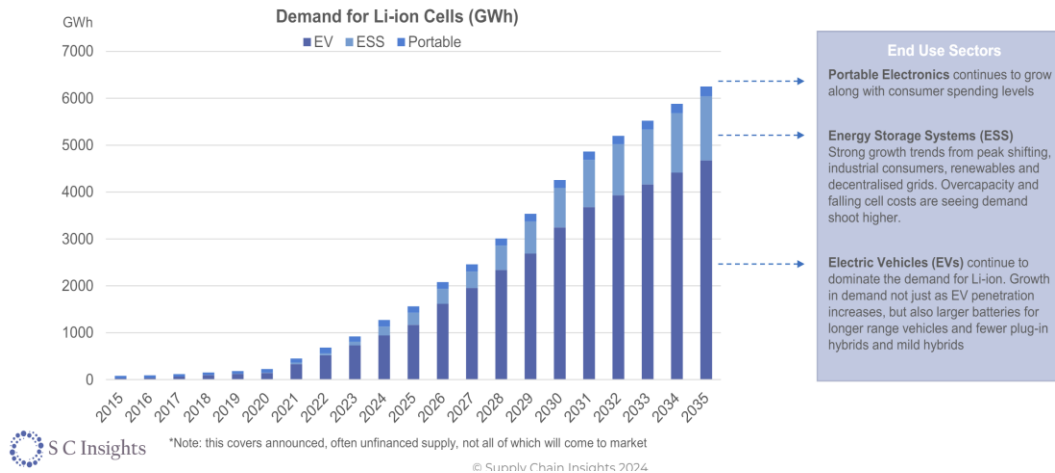
- 2) *The western press continues to dampen sentiment by focusing on downgrades to the US / EU electric vehicle demand growth story, ignoring global EV growth and the demand for ESS. The key metric for lithium demand is total battery GWH growth not the US EV penetration rate.***

**I agree with Ganfeng's Wang Xiaoshen who recently said in an interview that electrification is still in the early stages. The US narrative pushed on an almost daily basis by CNBC and FOX Business is that "nobody in America wants EVs."**

**Given that Americans don't have the wealth of EV offerings at all price points like the Chinese have, basing a conclusion about EVs based on the US market and extrapolating the result as lower lithium demand is foolish. US automakers are only now starting to deal with the reality that they overstated their ability to have affordable EVs in the market. This fact compounded by the wrong choices on battery type (high nickel vs LFP/mid nickel) will delay success of legacy OEMs. We won't see a change in this politicized narrative until after the US Presidential election in November. Despite the rhetoric, another Trump presidency won't kill the EV in the US.**

**Many pundits don't know enough about the battery market to realize that as long as lithium prices stay in a "reasonable range" which probably means not exceeding \$25 or \$30/kg, energy storage systems (ESS) for renewables and managing the grid is growing at a faster rate than EVs – albeit from a much lower base. Does the chart of GWH demand growth from SC Insights on the following page look like the battery demand sky is falling?**

Total Lithium-ion (Li-ion) battery cell demand is forecast to grow by 20.2% CAGR between 2024 and 2034 with more capacity set to be announced in both Europe and North America as supply chains regionalise to support established automotive industries.



### 3) **The continuing “the west can’t compete with China” lithium narrative.**

**The lowest cost lithium producers are not Chinese companies. The lowest cost brine is the Atacama and after that Argentina. The lowest cost hard rock is in Australia and after that pretty much “anywhere but China”.**

**On the other hand...**

**China not only controls the majority of lithium demand, it also controls the majority of hard rock lithium processing. Chinese companies also lead in lithium resource investment outside of China. These factors coupled with the opaque nature of the lithium industry in general have enabled companies like Shanghai Metal Markets to effectively control the lithium narrative of many western Investment Banks. The typical bank will boast about their “local team in China” while their output and references to “SMM” in their graphs demonstrates that many (read most) western banks that write about lithium let SMM have significant influence bordering on control of their narrative. Anyone that has followed the rise of China understands Chinese analysts are often pressured into writing the “party’ line. This influence impacts what Investment Banks write about supply and demand, inventory levels across the supply chain, battery technology, etc. It is my opinion that much of the information about the industry is intentionally distorted to China’s advantage.**

**I am not trying to diminish China’s significance in the lithium market. China’s current position was both well earned and hard won. Until fairly recently, China had the worst overall quality in both carbonate and hydroxide. China doesn’t have a “special gift for lithium processing”. What they have is a willingness to invest ahead of demand, continue to improve quality step by step and not focus on quarterly earnings. They have leveraged their low capital costs to build excess**

conversion capacity in China which has enabled them to effectively be the only game in town for spodumene producers. The west was first to produce lithium chemicals, invented the rechargeable lithium battery and LFP cathode. The west handed China lithium market dominance by worshipping at the “alter of outsourcing” capacity to the lowest cost country. Now we are paying the price. Rebalancing global lithium chemical supply will take time and willpower.

Creating a battery supply chain that tries to totally avoid China is probably a flawed (or at least a sub-optimal) strategy but could be done if the will/capital was there. What makes more sense to me is a hybrid strategy of continuing to work with China while building a viable alternative supply chain.

China used the likes of VW, GM and Tesla while developing their auto and later EV industry. Now those three companies are expendable to the Chinese and their declining performance in the China market clearly shows it. Why shouldn't the west benefit from CATL and BYD while growing alternatives that can compete with them across the battery supply chain? It comes down to will, policy and capital.

The IRA in the US and various “green” policies in the EU need rethinking and much more concrete action to enable any chance of the west beginning to play a credible game of lithium battery “catch up”.

Fortunately for lithium investors, the west still has the lowest cost lithium producers and the best lithium assets. The arrival of companies like Exxon, Equinor and Oxy along with Rio Tinto into the lithium space provides the kind of balance sheet power the industry needs. GM's investment in Lithium Americas is to date a largely unappreciated move that in my opinion will be looked back on in 2030 as a brilliant play by the automaker.

#### 4) *Thinking the 2022 price bubble was reality.*

This may be a corollary to my first point but currently there is a common narrative that current lithium prices are low. Today's spot price in China is a reasonably high price by the standard of prices since 2000. In 2019 I presented this graph during a tour of Australia and published it on Linked In. Clearly, I didn't foresee the price spike in 2022 but my point is that the



short term bubble of 2022 was the “outlier”. If we take the China spot price of today and average in current pricing in Japan and Korea which is ~ 20kg it shows my base case from five years ago held up pretty well (ex the price bubble).

Lithium demand is growing significantly, lower quality assets are being developed and capital costs have risen rapidly. The new incentive price for ex China lithium chemical projects

is above \$20/kg.

The longer it takes

price to return to

that level, the

longer the next

bubble will be

because China’s

lepidolite will not

be available as

“swing supply” it

will already be in

the market. The

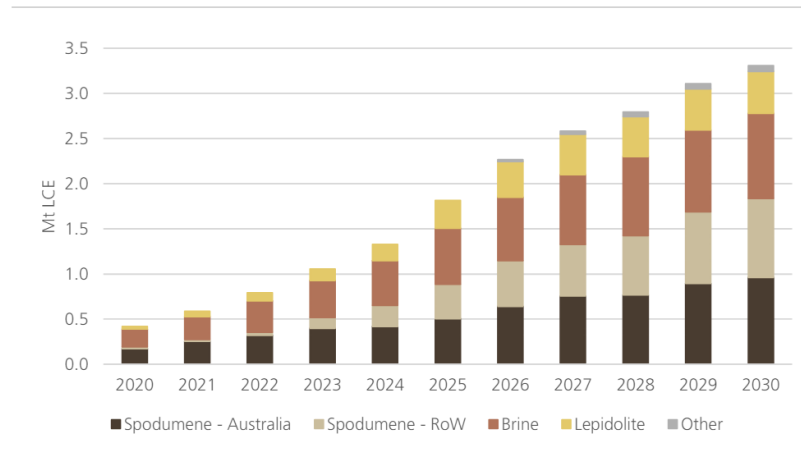
same is true for

the “low hanging fruit” in Africa. From my perspective, lithium sentiment is as

wrong headedly negative now as it was unreasonably optimistic just a couple of years ago.

No investing advice here, just telling you my approach. Despite the bloodbath in lithium equities my favorites like LAC, Pilbara, SQM, LAAC, etc. are still somewhere in between 2X and 6X my cost basis. I exited Sigma at more than 10X but with the price declines lithium stocks are less than 10% of my portfolio. The message is balance.

The Apple, Alphabet, Meta, Netflix, Tesla and Amazon I loaded up on well over a decade ago are on average up > 10X. They have balanced out the cratering lithium stocks in this cycle. The point here is that if you have conviction on the future of lithium, many lithium valuations are attractive. Waiting until the market “recovers” to buy is the classic rookie mistake.



Source: Company reports, Wood Mackenzie, UBSe