

Lithium “Story Time”

Humans have always been story tellers. Whether it is based on the need to explain phenomena that couldn't be understood, create a narrative to manage or change the beliefs of others, or simply entertain – most of us love a good story.

The lithium “story” continues to evolve. The number of lithium story tellers has increased by an order of magnitude in recent years as interest in the lightest metal has grown. Clearly there are a multitude of different stories about lithium being told by people with varying motivations.

The rise of EVs, BESS and the energy transition narrative has greatly increased the profile of the lithium industry. Yet, lithium is probably less well understood in 2024 than it was in 2014. Why? The various vested interests of those that benefit from controlling the narrative. Anyone planning to invest in lithium should be fully prepared to investigate the various lithium narratives and develop their own version of the lithium story before buying shares or making any type of investment.

In over six years of hosting the Global Lithium Podcast and more than a decade of speaking at conferences around the world, I have heard the frustrations, anger and occasionally the insults of lithium investors especially when I or a podcast guest may not agree with the story they want to hear.

In the early 1990s when I first got involved in the industry, few people cared about lithium. The lithium story was controlled by the two western companies that controlled the market – those companies are now called Albemarle and Arcadium which includes the old FMC Lithium. Lithium buyers of the day believed they had little choice in securing supply and understood lithium was controlled by companies whose commercial people for the most part lived in two small towns in North Carolina and seemed quite friendly with each other. Lithium was considered a clubby duopoly by the market in those days and with good reason. Some of my daughter's best friends in elementary school were the children of my competitors. They were not strangers in my home.

Once SQM entered the market the duopoly morphed into the “Big 3” and the lithium narrative had to be modified. The incumbents countered SQM's

single product (lithium carbonate) savage price cutting with the “buy SQM’s low quality lithium by-product at your peril” narrative. That line actually worked for a brief time.

Of course, SQM’s product eventually found a customer base; albeit mostly on the low end of the market in their early years. Many customers rejoiced that true price competition had entered the lithium narrative - at least in lithium carbonate. Others resisted changing to a new supplier especially in cases where the cost of lithium wasn’t a cost driver.

China and Russia made modest quantities of lithium chemicals and limited their market activities to a very narrow range of customers mostly in small Asian markets and Europe. Into the early 2000s, the “Big 3” dominated the lithium story.

China’s tiny internal market had been dependent at first on local low quality resources and later on SQM carbonate and to a lesser extent spodumene from Greenbushes feeding their limited conversion capacity. From my perspective, the lithium story entered the “rise of China” phase around 2005. Tianqi began to look for resources to buy. Ganfeng scoured the world for lithium by product values to process and later in the decade began to import chloride brine from Chile as feedstock for lithium chemical production.

Pictured below: speaking in Qinghai in 2014. CATL was just getting started.



Conversion capacity in China was growing quickly from a small base as were the Chinese cathode and battery businesses – BYD, B&K, BAK, ATL and CATL. That “alphabet soup” of companies and others like Easpring, LiShen, etc. Many more were to come as time passed.

Japan, who dominated the early years of the lithium ion battery, was caught napping as Korea and then China took share. Japan arrogantly assumed their quality was an unassailable moat. It was until it wasn't. Unlike China, neither Korea nor Japan took serious interest in lithium resources aside from POSCO's & Toyota Tsusho's efforts.

Lithium was still under most people's radar as the industry structure changed. In December 2012 China's Tianqi outbid US based Rockwood and announced the purchase of the Greenbushes mine in Australia before financial reality forced them to bring Rockwood into a JV structure in 2014.

By 2018 lithium was becoming a China story. The Big 3 was now the Big 4 – with a twist. FMC/Livent was no longer larger enough to be included; Ganfeng and Tianqi along with Albemarle and SQM dominated the lithium world. Building lithium conversion capacity became a national pastime in China.

Pictured below: Ganfeng in the early days. They have come a long way.



Many people I speak with today incorrectly believe that China produces most of the world's lithium from domestic resources. As long as China dominates hard rock processing, they are effectively the only game in town for Australian and other spodumene producers so their low quality domestic resources hasn't hindered their growth. At least not yet.

Hopefully, the likes of Albemarle, Talison Lithium Energy and the Wesfarmers/SQM Covalent JV come up the lithium chemicals production learning curve in Western Australia. Of course, we hear big talk from Tesla about their conversion project in Texas but Elon has historically had a troubled relationship with both lithium and timelines.

China has the most to gain from keeping lithium prices as low as possible. This is true across the battery supply chain as Chinese chemical converters benefit from low spodumene prices, cathode makers and battery producers like CATL and BYD benefit from lower lithium chemical prices and EV makers benefit from low battery cell prices. You have to give China credit for their twenty year track record of investing ahead of the lithium ion battery supply chain curve and becoming an "overnight success". It certainly helped that Western governments and companies lacked the insight to see what was happening or the vision to do anything truly meaningful about it once it became obvious how great China's battery and EV lead has become.

From my perspective it is unfortunate that the hastily thrown together and curiously named "Inflation Reduction Act" aka IRA was such a poorly crafted piece of legislation. Like many I have long hoped that the US would take a "Manhattan Project" like approach to building an independent lithium ion battery supply chain. Note I didn't say China free. The west has much to learn from China but also needs to wean itself from the level of dependence we have today.

Both the lithium ion battery and LFP cathode are US inventions. Unfortunately, we foolishly allowed our ability to cost effectively produce our own inventions to be hallowed during the outsourcing decades.

The IRA sounded great when announced with great fanfare but as is often the case when the US government acts, the devil is in the details. Although passed in 2022, many of the rules governing the act have yet to be clarified. Our politicians took the easy path of declaring a victory long before they had created the circumstances where we could have one.

Team Biden focused on the wrong end of the battery supply chain by allocating billions for battery plants while seeming to forget they need critical metals and cathode for them to be of any use. Can the IRA be modified and turned into a more effective tool? Perhaps but that is a story that is yet to be written. Stay tuned.

One of my favorite lithium stories in the fiction category is that “Goldman correctly predicted the price crash.” Really? Why then just as lithium prices peaked in November of 2022 prior to the steep drop in 2023 did Goldman raise their 2023 price prediction from ~\$16K/MT to \$53K/MT?

H2-23 onward. In this context, we are upgrading our China lithium carbonate spot (excl. VAT) price path through 23H1 to reflect near-term tightness and lagging spodumene contract price pass-through before a decline over the second half of next year to put the 2023 average at \$53,304/t LCE (vs. \$16,372/t LCE previously), though our forecast of a sharp reprice lower in 2024 remains unchanged (GSe \$11,000/t).

Almost all of us predicting price were wrong but Goldman somehow gets credit in many people’s mind for insight they clearly didn’t have. They continue to maintain the \$11K/MT price for 2024 and revised 2025 down to \$10K/MT. Clearly the 2024 call is incorrect and 2025 will likely be more than double the Goldman number yet many continue to praise Goldman’s alleged prescience in price predictions.

The lithium story is still in the early chapters. Whether your version of the lithium story has a happy or sad ending will largely depend on the actions you take to understand the market and the questions you ask along the way.

One of the best ways to being a story is to start with a question or questions. Here are some of the questions I am currently asking about the lithium market.

Global Lithium	Questions to Consider
<ul style="list-style-type: none">• What caused the bubble highs of 2022 and price drop in 2023?<ul style="list-style-type: none">▪ Panic buying beyond market demand led to both high prices and high SC inventory▪ The “draw down” of excess battery supply chain inventory impacted price more than new supply▪ High prices attracted unsustainable supply into the market<ul style="list-style-type: none">□ Low grade Chinese lepidolite and new supply from Africa• Has price bottomed?<ul style="list-style-type: none">▪ Did lower prices fix lower price?• Is the EV growth story still intact?<ul style="list-style-type: none">▪ Confusing a slowing growth rate with volume growth• What does the cost curve look like going forward?<ul style="list-style-type: none">▪ The debate over the “real” cost of low grade lepidolite & DSO• When does DLE make a meaningful contribution to supply?<ul style="list-style-type: none">▪ Will Exxon’s balance sheet accelerate progress?	

I will continue to tell my version of the lithium story via the Global Lithium Podcast, presenting at conferences and writing the occasional post on my website and Linked In.

For those wanting to know when I plan to publish a book. I have decided that it is better to release “Lithium Confidential” after I retire. It will be candid and it probably best left for a time when I am no longer active in the industry.