

Which Metals will benefit from the EV Boom in 2022 and after?

2021 has been a triumphant year for electric vehicle (EV) metal miner stocks. This is because EV sales are on track to grow ~100% on 2020 sales, which has led to surging demand for the EV metals lithium, cobalt, graphite, nickel, neodymium-praseodymium (NdPr), and dysprosium (Dy).

China lithium carbonate prices led the way rising from CNY 43,750 (US\$6,859/t) to CNY 232,500 (US\$36,452/t) in 2021, for a 5.3x gain. Cobalt prices have risen from US\$14.51/lb to US\$31.42/lb in 2021, for a 2.2x gain.

All of this demand for EV metals has also led to a surge in takeovers and strategic buy-ins in 2021. The Chinese have again led the charge leaving the Western world asleep at the wheel, as I discuss below.

China lithium carbonate prices have risen 5.3x so far in 2021



Source: Trading Economics

China leads the lithium takeover charge as the Western world is left asleep at the wheel

The same theme of the past several years continued in 2021. While the West talked about acting, China and even Russia acted, with China making some big moves.

Take a look at the lithium takeovers and buy-ins during 2021 summarized below.

- **Bacanora Lithium PLC** (AIM: BCN) – Taken over recently by China’s Ganfeng Lithium.
- **International Lithium Corp.** (TSXV: ILC) – Mariana Project final project share buyout by China’s Ganfeng Lithium.
- **Ioneer Ltd** (ASX: INR) – South Africa’s Sibanye-Stillwater invested US\$490 million for a 50% interest in the Rhyolite Ridge Lithium-Boron Project.
- **Millennial Lithium Corp.** (TSXV: ML | OTCQX: MLNLF) – Bidding war (Ganfeng, CATL, LAC) eventually won by

- Canada's Lithium Americas Corp. (TSX: LAC | NYSE: LAC) with a 100% company buyout offer for C\$4.70 per share.
- **Neo Lithium Corp.** (TSXV: NLC | OTCQX: NTTHF) – 100% company buyout by China's Zijin Mining at C\$6.50 per share.
 - **Arena Minerals Inc.** (TSXV: AN) – China's Ganfeng Lithium project and equity stake, Lithium Americas initially equity stake then increased equity stake.
 - **North America Lithium Inc.** ("NAL") – Australia's Sayona Mining (ASX: SYA) (75%) & Piedmont Lithium Inc. (Nasdaq: PLL | ASX: PLL) (25%) acquire NAL.
 - **AVZ Minerals Limited** (ASX: AVZ) – Sold 24% of the Manono lithium and tin project JV to China's Suzhou CATH Energy Technologies (jointly owned by Chinese battery maker CATL) for US\$240 million.
 - **Global Lithium Resources** (ASX: GL1) – China's Yibin Tianyi (owned by CATL, the world's largest battery manufacturer) to invest \$6.2 million for a 9.9% equity interest in Global Lithium Resources.
 - **Alpha Lithium Corporation** (TSX.V: ALLI) – Russia State backed Uranium One (TSX: UUU) agrees to buy 15% of the Tollilar salar for US\$30 million, option/right to buy a further 35% for US\$185 million.

Of the ten mentioned above, six of the ten buyers are Chinese companies, one is Russian, one is South African, one is Canadian, and one is Australian. What is also interesting is that with the Alpha Lithium Tollilar salar deal the buyer is a Russian 'state backed' company with significant plans to acquire more global lithium assets.

2022 will see Tesla dramatically ramp up production and require significantly more EV metals

In 2022 Tesla is likely to exceed 1.5 million electric car sales, up from around what should be about 900,000 in 2021 (a 2/3rds production increase estimate for 2022). Tesla has their Texas gigafactory and their Berlin gigafactory about to open

and officially start production, will be expanding giga Shanghai, and will see huge sales of Model Y, some Tesla Semis, and finally the start of production of their Cybertruck in late 2022. All of this will require a dramatic increase in EV metals demand from Tesla in 2022, potentially about a 66% increase based only on the 2/3rds increase in production forecast.

Chinese EV companies such as leader BYD Co with their own huge expansion plans, look set to chase Tesla again in 2022. They will also require significant additional volumes of lithium in 2022.

Global electric car sales look set to rise from 3.24 million in 2020 to exceed 6 million in 2021. My forecast for 2022 is 10 million.

Tesla is set for a huge increase in production in 2022 (Texas gigafactory as of August 31, 2021, set to open very soon)



Source: iStockphoto

Closing remarks

2021 saw the world wake up to the fact that electric vehicles are taking off and will largely replace conventional cars this decade, at least in most parts of the world. The ~100% surge in electric car sales during 2021 has caused an immediate impact on the EV metals supply chain, with a resulting huge 5.3x price increase in lithium, and large increases also in cobalt, nickel and NdPr prices. Graphite looks likely to follow next.

Meanwhile, the Chinese pounced yet again, buying up or into 6 of the 10 major lithium acquisitions in 2021. The other four were made up with one each from Russia, South Africa, Canada, and Australia. Sadly again the Americans were absent!

Will 2022, under Biden's lead, finally see the US awaken. I think it is possible, after all Tesla is massively ramping up their production in 2022.

I hope 2022 will be the year the US wakes up and starts to secure their EV metals supply chain. Because if they don't, the Chinese will continue to dominate EV supply chains globally leaving the US auto industry at their mercy.