## A look at the lithium market leaders as EV manufacturers face generational challenge to keep factories running

written by Matt Bohlsen | October 17, 2022 Investors are starting to realize the lithium boom is likely to last the next 1-2 decades. EV manufacturers are now facing a generational challenge to secure enough lithium supply to keep their factories running.

In 2021, the <u>IEA forecast</u> that the world will need **13-42x more lithium by 2040 (from 2020 levels)**. The 13x increase was based on the stated policies track (as of 2021) and the 42x increase was based on the sustainable development scenario (we move rapidly towards a world of zero emissions). Just this past week <u>Benchmark Mineral Intelligence forecast</u>: "Lithium has to scale **twenty times by 2050** as automakers face generational challenge". This was **based on 2021 levels**. Our exclusive research at <u>Trend Investing forecast</u> a **35x increase** in lithium demand **from 2020 to 2037**.

As of October 2022, the best positioned EV manufacturers are Tesla & BYD Co, and perhaps Ford & GM. These companies have made good preparations including multiple lithium off-take agreements and investments in the lithium companies or projects. Examples are Ford's July 2022 off-take and A\$300 million debt facility agreement with Australian lithium junior Liontown Resources Limited (ASX: LTR), and the August 2022 GM off-take and US\$198 million pre-payment deal with Livent. Both these recent deals show the new reality of what it takes to secure future lithium supplies.

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Tesla Model 3 — A global leader in electric car sales the past 5 years

## Who are the lithium leaders?

The lithium leaders are those lithium companies that are currently the leading producers and who have potential to significantly ramp their lithium production this decade.

**Sociedad Quimica y Minera S.A.** (NYSE: SQM) — A Chile company with a 51% share of the world's best lithium brine mine at the Atacama Salar in Chile. They also own 50% share of the Mt Holland spodumene project (with Wesfarmers) set to begin production in Q4, 2023. SQM is targeting lithium carbonate equivalent ("LCE") sales in 2022 of 150,000t, 210,000t in 2023, and 240,000t in 2024.

Albemarle Corporation (NYSE: ALB) — An American company often seen as the lithium leader. They own 49% of the Atacama Mine (with SQM JV) and 49% of the world's best spodumene mine Greenbushes in Australia. They also have a 50% JV ownership (with Mineral Resources) of the massive Wodgina Mine in Western Australia, which recently began producing again with plans for a large ramp ahead. The JV also has a recently completed hydroxide conversion plant (60% ALB; 40% MIN) in Kemerton, WA. Albemarle's production is targeted to increase from ~130,000t LCE in 2022 to ~220,000t LCE in 2025.

Ganfeng Lithium Group Co., Ltd. (SHE: 002460 | HK: 1772 | OTC: GNENF) — A Chinese lithium company focused on lithium refining, however now has multiple projects around the world including 49% of Mt Marion in WA and a 50% JV with Lithium Americas at the massive Cauchari-Olaroz project in Argentina due to start production soon. Ganfeng aims to boost production from ~90,000t in 2022 to 200,000tpa by 2025.

The other leaders with large projects include Pilbara Minerals Limited (ASX: PLS) with their massive Pilgangoora Mine in Western Australia (~90,000tpa in 2022/23), Mineral Resources Limited (ASX: MIN), Tianqi Lithium Corporation, Livent Corporation (NYSE: LTHM) and Allkem Limited (ASX: AKE | TSX: AKE).

Together the names above represent the biggest eight lithium producers and they produce most of the world's lithium today.

Some others such as AMG Advanced Metallurgical Group NV and a few smaller Chinese producers make up the balance of global lithium production.

The next or near term producers set to come online include (in rough order) Argosy Minerals Limited (ASX: AGY), Lithium Americas Corp. (NYSE: LAC | TSX: LAC), Core Lithium Ltd (ASX: CXO), — SIGMA Lithium Corporation (NASDAQ: SGML | TSXV: SGML), Sayona Mining Limited (ASX: SYA | OTCQB: SYAXF)/Piedmont Lithium (Nasdaq: PLL | ASX: PLL) (NAL Project in Canada), and Liontown Resources Limited (ASX: LTR).

There are also a bunch of other very promising lithium junior miners with potential to become new lithium producers after 2025. Three of the biggest projects could be in Canada with Critical Elements Lithium Corporation (TSXV: CRE | OTCQX: CRECF), Patriot Battery Metals Inc. (TSXV: PMET | OTCQB: PMETF) and Frontier Lithium Inc. (TSXV: FL | OTCQX: LITOF).

## Closing remarks

It may seem like there is a lot of lithium supply coming online in the next few years, but of course demand is rising faster than supply, assuming EV sales growth continues at a 50%+ growth rate as expected.

Could there be some periods of short term oversupply? Yes, but only likely if EV sales falter. Either way the decade or two ahead looks set to be a very exciting time for lithium investors and the lithium leaders discussed in this article.

Disclosure: The author is long Tesla, BYD Co and most of the lithium stocks mentioned in the article.

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