



Australian Lithium Export Market Review

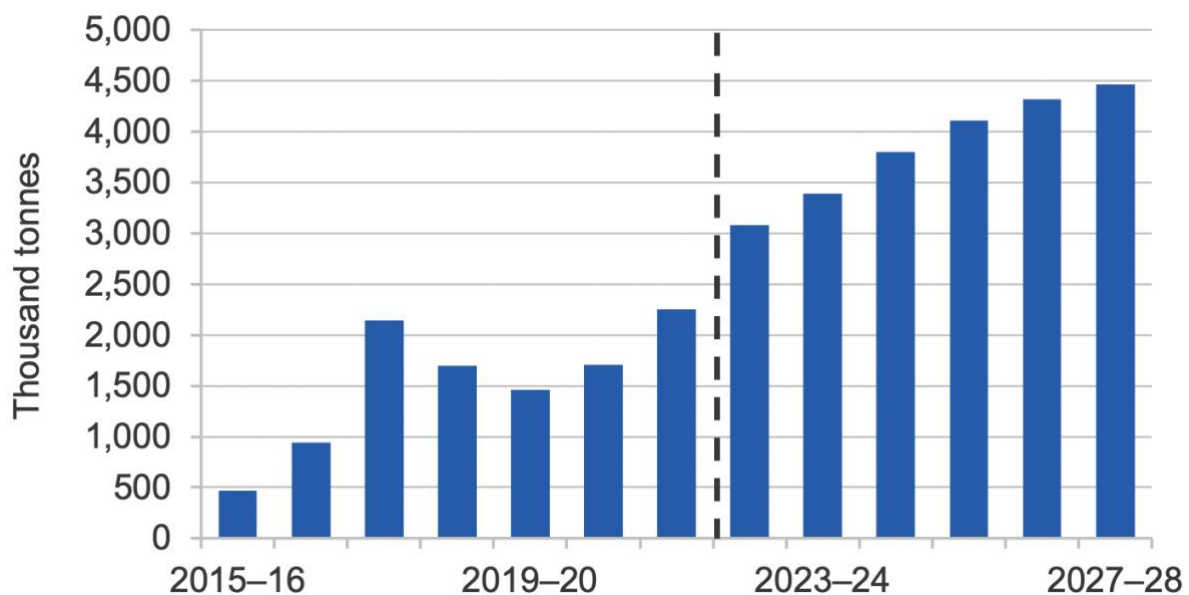
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As a world leading producer of lithium, Australia is in the box seat to capture a globally significant share of the value-adding required for the global energy transition and supply chain diversification imperative. Australia will be home to 3 of the largest lithium hydroxide facilities in the world, all with ASX-listed companies holding equity stakes. Australia's established lithium miners and refiners have built incredible momentum in recent years, injecting billions of capital expenditure into Australia's economy and future capacity. With new firms across the states set to come online across the value chain, Australia is just at the start of its critical mineral industry development opportunity comparative to the future economic growth and export earnings potential, and this can be accelerated if industry and public policy align in Australia's national interest.

Australia's dominant position in the global lithium market is critical to the transformation to decarbonised energy and electrified mobility. In 2022, Australia supplied [79% of the world's hard-rock lithium](#) (spodumene concentrate), and [53% of the global lithium supply](#). The [US Geological Survey](#) identified Chile and China as fast-growing lithium markets, capturing 30% and 15% market share respectively (up from 26% and 13%).

Figure 1: Australian Spodumene Exports:



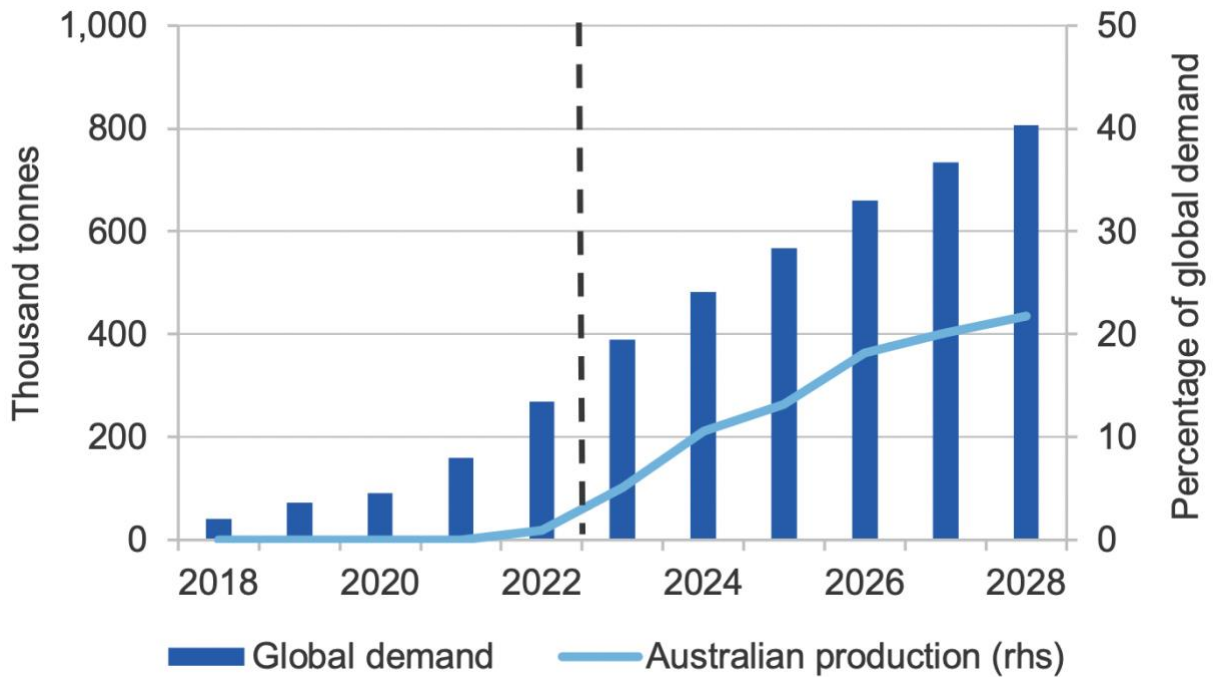
Source: Wood Mackenzie (2023), [Department of Industry, Science and Resources](#) (2023)

The [Office of the Chief Economist](#) forecasts Australia's annual production capacity will reach 431,000 tonnes of lithium carbonate equivalent (LCE, global unit measure of lithium

content) in 2022/23, up 29% from 2021/22. Spodumene prices are forecast to rise 40% from 2021/22 prices to US\$4,350/t in 2022-23, with lithium hydroxide prices expected to follow suit, rising 39% to average US\$61,250/t in 2022/23. Australia’s forecasted lithium export earnings are expected to more than triple from 2021/22, reaching \$18.6bn in 2022/23.

China continues to dominate Australia’s customer base, unchanged from 96% of total lithium exports in 2021/22. Australia’s second and third largest lithium export destinations, Belgium and South Korea, only accounted for 2.3% and 0.9% respectively.

Figure 2: World and Australian Lithium Hydroxide Output:



Source: Wood Mackenzie (2023), Department of Industry, Science and Resources (2023)

Australian Lithium Producers’ Growth

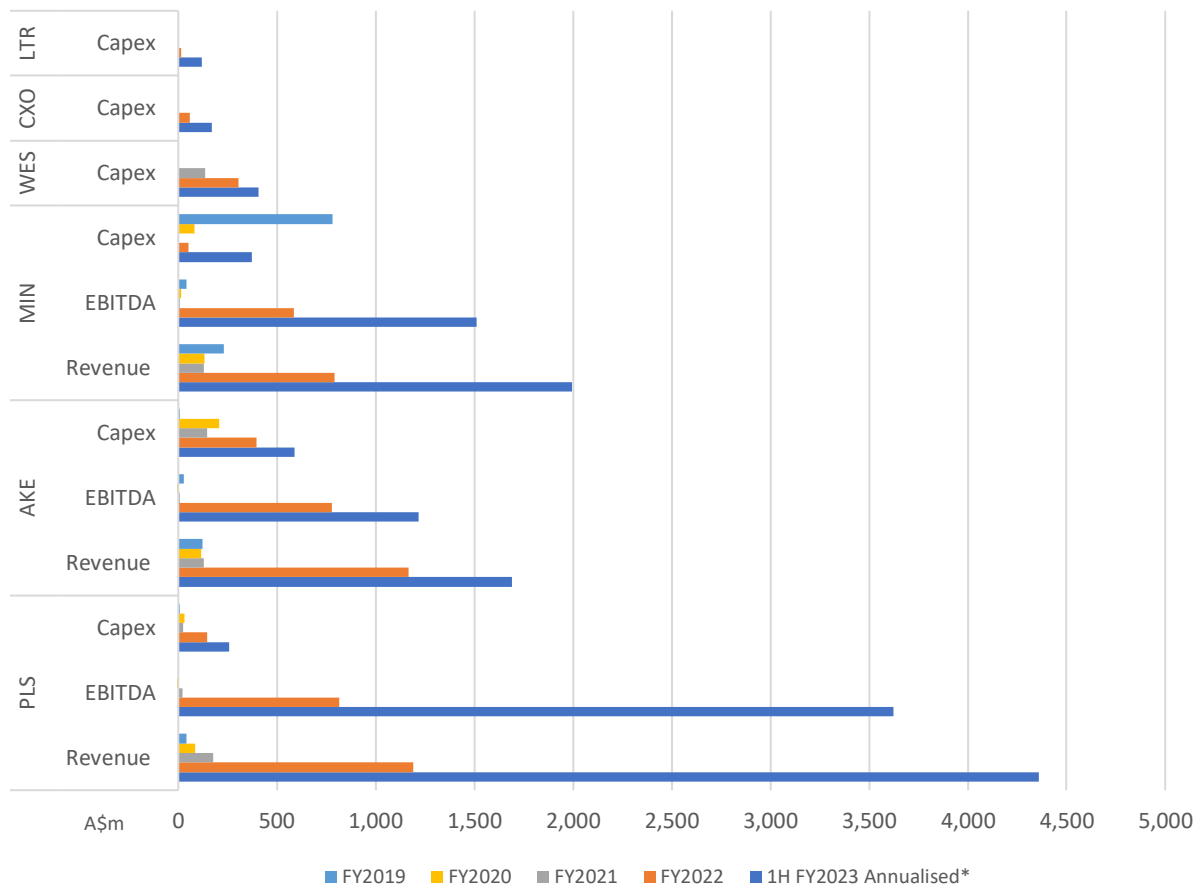
Australia’s established producers have realised incredible growth in recent years, adding material value to Australia’s export industry and economic development.

In 2020, Australian nickel miner **IGO Ltd** (IGO.AX) invested US\$1.4bn to acquire a 49% of Chinese Tianqi Lithium Corporation Australian holding company, forming the JV [Tianqi Lithium Energy Australia \(TLEA\)](#). The strategic stake provided IGO with a 25% indirect interest in the world’s largest lithium operation, Greenbushes, WA, operated by Tianqi Lithium and Albemarle.

TLEA constructed the Kwinana Lithium Hydroxide Facility (LHM) in WA, producing first battery-grade product in May 2022. Kwinana provides IGO exposure to the downstream value-added market, supplying critical precursor materials to global leaders within the battery industry, including LG Chem, SK Innovation, Northvolt and EcoPro.

In 1HFY2023, IGO achieved an NPAT of \$631m from Tianqi for its indirect interest in Greenbushes, a 44x increase from 1HFY2022. IGO also received a \$440m dividend from Tianqi in the same period. The December half of 2022 marked a [historical milestone for IGO](#), with Kwinana generating positive earnings of \$12m EBITDA.

Figure 3: ASX-listed with Australian Lithium Assets Capital Expenditure and Earnings:



Source: Company Accounts, CEF Calculations

Pilbara Minerals (PLS.AX) achieved record profitability in 1HFY2023. Revenue from Pilbara’s Pilgangoora spodumene exports grew over 647% to \$2.18bn, translating to an EBITDA of \$1.81bn, over 1,000% growth year-on-year. Pilbara Minerals earnings performance was a result of 83% production growth, producing ~ 310k dmt (thousand dry metric tonne) at an average realised price of US\$4,993/dmt for the 6-months (up over 300% from 1HFY2022).

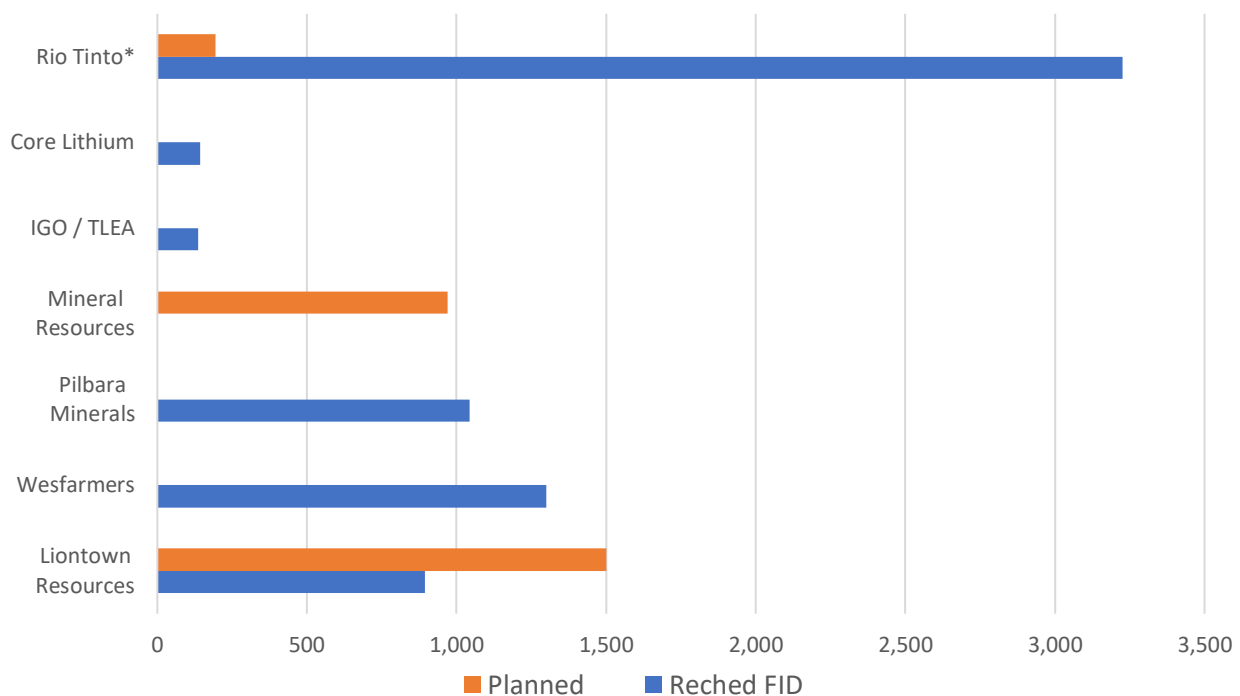
Mineral Resources (MIN.AX) had record earnings in the same period. **Mineral Resources** achieved a 597% growth (year-on-year (yoy)) in revenue to \$997m in 1HFY2023, resulting in an EBITDA of \$756m (+430% yoy). Mineral Resources earnings are primarily from its downstream tolling agreements with key partners Albemarle and Ganfeng Lithium, converting Mt Marion, WA, spodumene feedstock into lithium hydroxide across Australia and China.

Allkem (AKE.AX) has a global lithium portfolio, with its South American lithium brine and Australian spodumene operations. Mt Cattlin, Allkem’s largest hard-rock lithium operation, achieved revenue of US\$257m in 1HFY2023, up 124% yoy. This translated to a 191% growth in EBITDA from Australian operations to US\$203m. Allkem achieved a record average realised price of US\$5,136/dmt for the December half.

Investing in Future Growth

Australian miners have their targets set on capturing an even greater share across the burgeoning lithium value chain. Whilst Australia provided 53% of the lithium supply in 2022, Chile and China have climbed the market share ladder as leaders in downstream production of lithium hydroxide. Now, Australia is home to 3 of the world's largest LHM facilities along the coastline of WA set to come online in the near future. Australian firms are investing billions into the global lithium market, set to onshore the value chain of energy and mobility decarbonisation.

Figure 4: ASX-listed Future Capital Investment into Lithium Assets:



Source: Company Accounts, CEF Calculations

Pilbara Minerals is expanding its global footprint, gaining exposure to the downstream value-added lithium hydroxide market via a partnership with South Korea's POSCO, a global-leading battery chemical processing company servicing global leaders in EV battery production.

Pilbara Minerals is transforming its earnings into the expansion of its onshore mining capacity with the P680 and [P1000 projects](#), bringing annual production to over 1,000kdm from Western Australia. On 29 March 2023, Pilbara reached FID on the \$560m P1000 expansion, bringing capital investments in Pilgangoora to \$964m across the two projects.

For FY2023, Pilbara updated its total capex guidance, investing over \$390m into waste mine development, capacity expansion projects and decarbonisation, and integrating a [6MW solar farm with Pacific Energy](#) into the Pilgangoora Operation.

Likewise, **Mineral Resources** expanded its FY2023 capex guidance to over \$660m, investing into its Wodgina and Mt Marion spodumene assets, and acquiring 50% stakes in strategic partner Albemarle's [Chinese LHM facilities](#), Qinzhou and Meishan for US\$660m.

Mineral Resources retains a 15% equity stake in the Kemerton, WA, LHM facility alongside Albemarle.

TLEA is expanding its footprint across the Pilbara, acquiring ASX-listed Essential Metals for \$136m, gaining access to the lithium exploration zone between Kalgoorlie and Norseman. A 2019 sale of [Essential Metals](#) was rejected by the Foreign Investment Review Board (FIRB) to a Chinese-backed firm.

Core Lithium (CXO.AX) has invested \$144m into building Northern Territory's Finnis Lithium mine, the only lithium mine in operation outside of Western Australia. The spodumene concentration facility is set to be completed in 2023, with Core shipping its first direct ore to its key battery supply chain customers, including Tesla and Tesla-supplier, Sichuan Yahua.

Wesfarmers (WES.AX) chemicals group, WesCEF, has partnered with Chilean lithium giant, SQM, to construct the Mt Holland lithium mine and Kwinana lithium hydroxide refinery. Recognising the growth potential of the critical minerals industry, WesCEF will invest ~\$1.3bn for its equity share in getting the project online.

Liontown Resources (LTR.AX) is investing \$895m into the Kathleen Valley lithium mine in WA. Securing fundamental off-take before construction, Liontown will supply concentrate to global leaders in electrified mobility, namely Tesla, Ford and LG Energy Solutions. Liontown are also completing a Scoping Study for a proposed \$1.5bn LHM refinery for Kathleen Valley, which would position the company as the third largest LHM producer globally.

In 2022, **Rio Tinto** (RIO.AX) acquired the [Argentinian Rincon Lithium Project for \\$825m](#), a large undeveloped brine operation in the Salta Province. Rio have also invested a total of \$2.4bn into the [Serbian Jadar Lithium Project](#), however, licenses have been revoked after protests regarding the environmental impact of the mine. Rio has continued discussions with the Serbian Government on re-starting the project, on the basis the operation could supply 90% of Europe's lithium demand.

Liontown Resources and the Albemarle bid

On 27 March 2023, ASX-listed **Liontown Resources** (LTR.AX) received an indicative proposal from [US Albemarle](#) to acquire all shares at \$2.50 per share, an offer that positions Liontown at a \$5.5bn valuation. The Liontown board unanimously [rejected the takeover bid](#), on the grounds it was not in the best interest of shareholders, substantially undervaluing the future growth and expansion opportunities currently being explored.

Two years ago, Liontown had four employees. Pre-bid from Albemarle, Liontown has 200 staff, a cash balance of \$384m, undrawn facilities of \$300m and a \$3.3bn market cap to meet the capital demands of the \$895m Kathleen Valley lithium project in WA. As equities analyst [Owen Evans writes in an analysis recommending that FIRB block the bid](#), if Kathleen is as profitable as the other lithium producing assets in Australia, the firm can comfortably self-fund expansionary projects that would add material value to the Australian economy.

It is Australia's national interest to support the growth of Australia's new-energy material industry, limiting the strategic control of foreign takeover bids that have potential to restrict Australia's production capacity and future economic growth. Seizing the opportunity and value of the rapidly expanding global critical minerals industry is imperative for Australia.

Figure 5 details the five year outperformance of the ASX-listed lithium miners relative to the overall Australian market. The growth has been staggering, and the result is improved capital market access.

Figure 5: ASX-listed Lithium Firms 5Y Growth Against Market Performance:



Source: Yahoo Finance

Our analysis highlights the time-critical opportunity for Australia to seize its multi hundred billion dollar, once in a hundred year investment and export opportunity to dominate the dramatically expanding global value-added critical minerals industry, detailed in our [recent comprehensive report](#). Key to this is policy settings that attract investment and significant strategic commitment of public funding to incentivise and crowd-in private capital, as is the case in our partner nations including the US, with Biden’s game-changing Inflation Reduction Act.

Editors: [Tim Buckley](#) and [Annemarie Jonson](#), CEF