



**Pilbara
Minerals**

Corporate Presentation

Thursday 16 September 2021

ASX: PLS / BBG: PLS AU



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Mineral Resources and Ore Reserves

Recipients of this presentation outside Australia should note that it is a requirement of the Australian Securities Exchange listing rules that the reporting of ore reserves and mineral resources in Australia comply with the Australasian Joint Ore Reserves Committee Code for Reporting of Mineral Resources and Ore Reserves (“JORC Code”), whereas mining companies in other countries may be required to report their ore reserves and/or mineral resources in accordance with other guidelines (for example, SEC Industry Guide 7 in the United States). Such estimates of reserves are largely dependent on the interpretation of data and may prove to be incorrect over time. No assurance can be given that the reserves and contingent resources presented in the document will be recovered at the levels presented. Recipients should note that while Pilbara Minerals’ mineral resource and ore reserve estimates comply with the JORC Code, they may not comply with the relevant guidelines in other countries, and do not comply with SEC Industry Guide 7. In particular, SEC Industry Guide 7 does not recognise classifications other than proven and probable reserves and, as a result, the SEC generally does not permit mining companies to disclose their mineral resources, including indicated and inferred resources, in SEC filings. Accordingly, if Pilbara Minerals were reporting in accordance with SEC Industry Guide 7, it would not be permitted to report any mineral resources, including indicated and inferred resources, and the amount of reserves reported by Pilbara Minerals may be lower than its estimates. You should not assume that quantities reported as “resources” will be converted to reserves under the JORC Code or any other reporting regime or that Pilbara Minerals will be able to legally and economically extract them. In addition, investors should note that under SEC Industry Guide 7, mine life may only be reported based on ore reserves. Mine life estimates in this presentation assume that a portion of non-reserve resources will be converted to ore reserves, which would not be permitted under SEC Industry Guide 7.

Information regarding expansions in production capacity (Pilgan Plant and the Ngungaju Plant)

Information in this presentation regarding expansions in nameplate capacity of the Pilgan Plant and the Ngungaju Plant are underpinned by the Company’s existing Ore Reserves that have been prepared by a Competent Person in accordance with the JORC Code (2012 Edition) and were released by the Company to ASX on 17 September 2018 (Pilgangoora Reserve and Resource Upgrade) and as updated in the Company’s 30 June 2020 Annual Report. The relevant proportions of proven Ore Reserves and probable Ore Reserves are 17% proven Ore Reserves and 83% probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in that release or report and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed.

Information regarding the Ngungaju Plant and South Pit Area (formerly Altura Lithium Operations)

Information regarding the recently acquired Ngungaju Operation including the Ngungaju Plant (formerly the Altura lithium project) in this presentation including information relating to the Ngungaju Plant’s individual (ie. not combined with the Pilgan Plant) production, recoveries and reserves estimates, life of mine plans has been sourced using publicly available information and has not been independently verified by the Company. At the time of the acquisition of the project (20 January 2021), the Company had undertaken limited due diligence in relation to the project and therefore may not have been aware of all the material information, assumptions, facts and circumstances. Since the acquisition, the Company has continued to evaluate the project, however, at the date of this presentation this evaluation remains ongoing and is incomplete. Accordingly, the Company does not, subject to the Corporations Act, make any representation or warranty, express or implied, as to the accuracy or completeness of this information relating to the Altura project or the Ngungaju Plant in this presentation.

While the Company has continued to conduct due diligence on the project, Pilbara Minerals has not yet completed its independent verification in relation to the accuracy or completeness of the information provided, and there is no assurance that all material issues and risks in relation to the project and the Ngungaju Plant have been identified. Receipt of new, additional or updated information, assumptions or modifying factors may change production targets, recoveries, ore reserves estimates, life of mine plans and other forward-looking statements concerning the project and the Ngungaju Plant in this presentation. To the extent that this information is incomplete, incorrect, inaccurate or misleading, there is a risk that the production, profitability and future results of the operations of Pilbara Minerals may differ (including in a materially adverse way) from Pilbara Minerals’ expectations as reflected in this presentation, or that additional liabilities may emerge.

In this respect, the JORC ore reserves estimates previously stated in the ASX announcement by Altura Mining Limited dated 9 October 2019 are currently under review by the Company and the Company will use its own economic assumptions and modifying factors. These and other factors may result in changes (including the possibility of reductions) in the and Ore Reserves estimates previously stated by Altura Mining Limited.

No new information - Pilgan Plant and Operation (formerly Pilgangoora Plant and Operation)

In respect of the Pilgan Operation, information concerning the current ore reserve estimates, production targets and forecast information derived from the production targets (including information relating to the proposed expansions of the Pilgan Plant and Operations), is extracted from the ASX announcement dated 3 August 2018 entitled "Outstanding DFS Results Support Pilgangoora Expansion"; the ASX announcement dated 17 September 2018 entitled "Pilgangoora Reserve and Resource Upgrade"; the ASX announcement dated 26 March 2019 "Stage 3 Scoping Study Outcomes"; the ASX announcement dated 27 August 2019 entitled "Update on Partnering Process and Revised Stage 2", and as updated in the 30 June 2020 Annual Report.

Information concerning the current mineral resource estimate relating to the entire Pilgangoora Project comprising the Pilgan Operation and the Ngungaju Operation (formerly Altura Lithium Operation) is extracted from the ASX Announcement dated 6 September 2021.

Pilbara Minerals confirms that it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the resource and reserve estimates, production targets and forecast financial information derived from the production targets in the announcements continue to apply and have not materially changed. Pilbara Minerals confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

The scoping and other technical studies referred to in this report in respect of an incremental expansion of the Pilgan Plant and Operations (including revised Stage 2 expansion and/or the Stage 3 expansion) have been undertaken to determine the potential viability of those expansions and to reach a decision to proceed with more definitive studies. Each scoping study has been prepared to an accuracy level of $\pm 30\%$. Each scoping and technical study is based on low-level technical and economic assessments and is insufficient to provide assurance of an economic development case at this stage or provide certainty that the conclusions of the studies will be realised. The results of the studies should not be considered a profit forecast or production forecast.

Past performance

Statements about past performance are not necessarily indicative of future performance.

References to Australian dollars

All references to dollars (\$) and cents in this report are to Australian currency, unless otherwise stated.

Acceptance

By accepting, accessing or reviewing this document you acknowledge, accept and agree to the matters set out above.

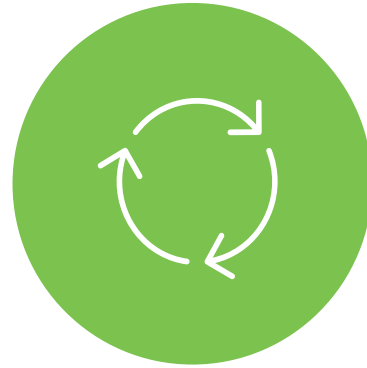
Authorisation of release

Release of this market announcement is authorised by Ken Brinsden, Pilbara Minerals Limited's Managing Director.

It's been a big year for Pilbara Minerals



World's largest independent hard rock lithium operation



One operation with two processing plants



ASX200
~\$6.5B market cap



Growth and diversification opportunities



One operation, two processing plants

Targeting expanded production capacity to 560-580,000 tpa spodumene concentrate by mid-CY2022, maximising participation in rapid demand growth

- **Products:**
 - ~5.5% - 6% Li₂O spodumene concentrate
 - +5% primary tantalite concentrate
- **Pilgan Processing Plant**
 - in production and operating at nameplate capacity ~330,000tpa
 - improvement projects underway to increase capacity by a further 30-50,000 tpa (10-15% increase)
 - potential phased expansion, increasing nameplate capacity incrementally to ~800-850,000 tpa, subject to prevailing market conditions
- **Ngungaju Processing Plant (pronounced - Nuh-ga-ju)**
 - Altura Lithium Operation acquired during FY2021, whilst on care and maintenance
 - FID made for staged restart by end of CY2021, targeting 180-200,000 tpa in production capacity by mid-CY2022
 - engineering underway to improve performance and integrate operation
- **Future expansion opportunities aimed at achieving a combined nameplate processing capacity from both plants supporting +1 Mtpa spodumene concentrate and the production of value-added products**



Pilbara Minerals

...Powering a sustainable energy future

Market Growth

UK and Europe

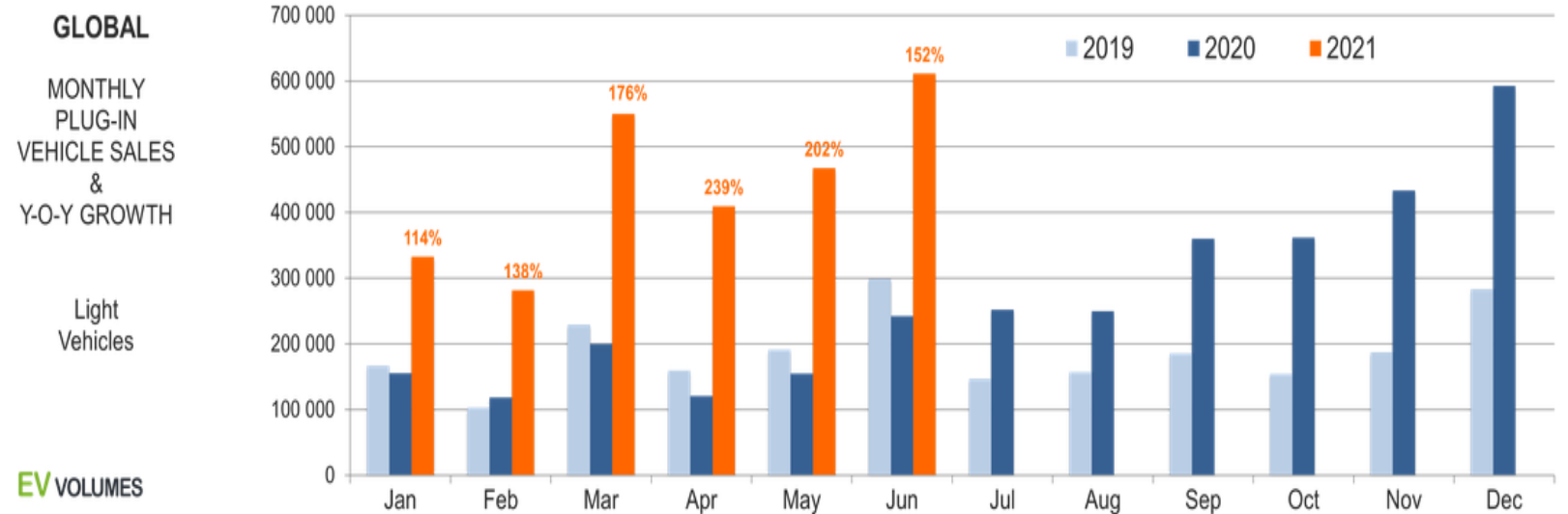
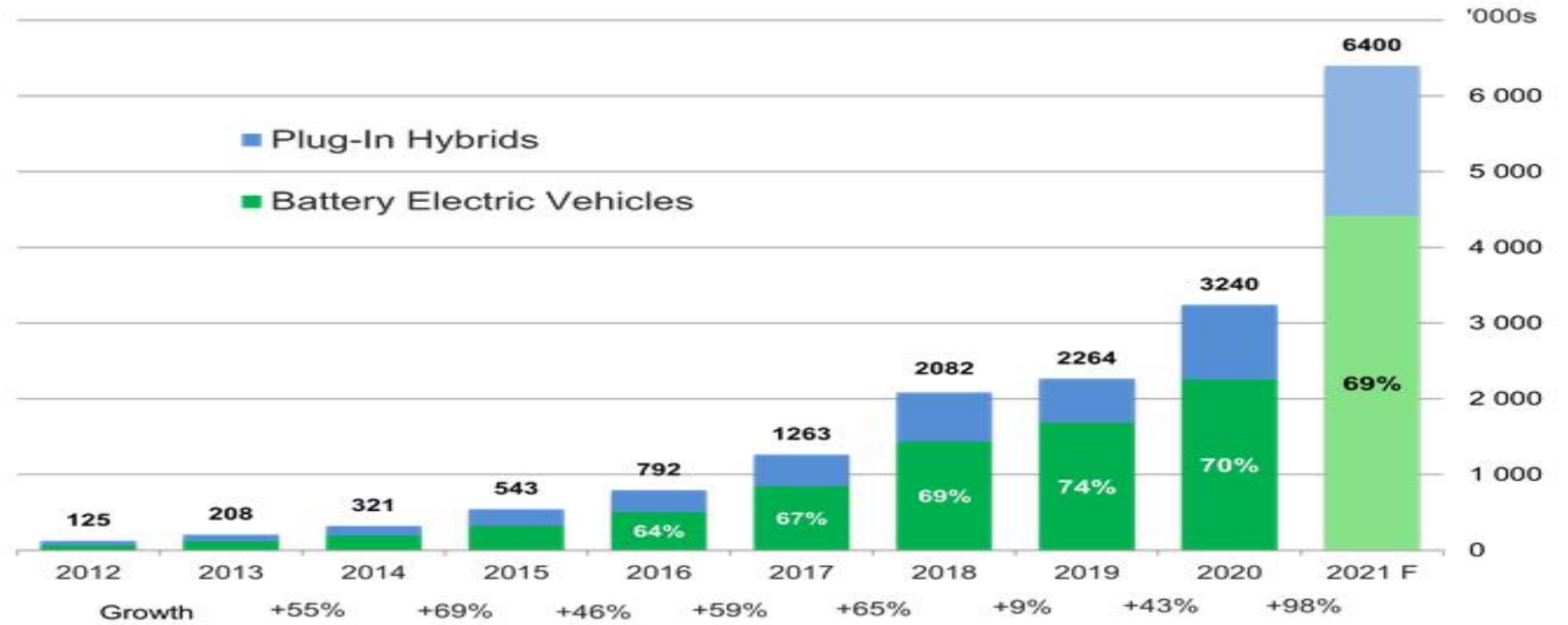
- World's largest EV market in 2020
- A market that will be dominated by high-nickel cathode batteries driving lithium hydroxide demand

China

- EV sales strong
- Addressable market growth, domestic China
 - LFP 'pack' technology
 - Stationary storage
 - Lead acid battery replacement

GLOBAL PLUG-IN VEHICLE SALES

EV VOLUMES



Source: <https://www.ev-volumes.com/country/total-world-plug-in-vehicle-volumes/>





Pilbara Minerals

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Market Growth

Industry Trends

- Spodumene chemical conversion direct to lithium hydroxide
- Growth in high-nickel (energy dense) cell capacity
- LFP as a low-cost cell application
- Industry bifurcation
 - Technology
 - Feedstock
- Product carbon footprint

High-nickel cathode materials monthly production (tonne)

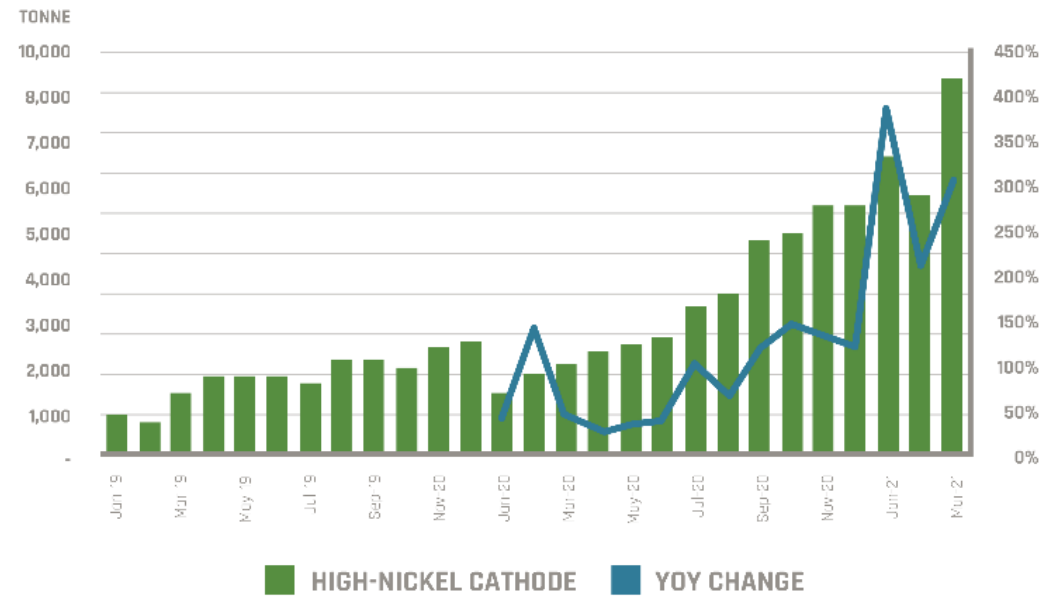


Chart source: UBS

LFP cathode materials monthly production (tonne)

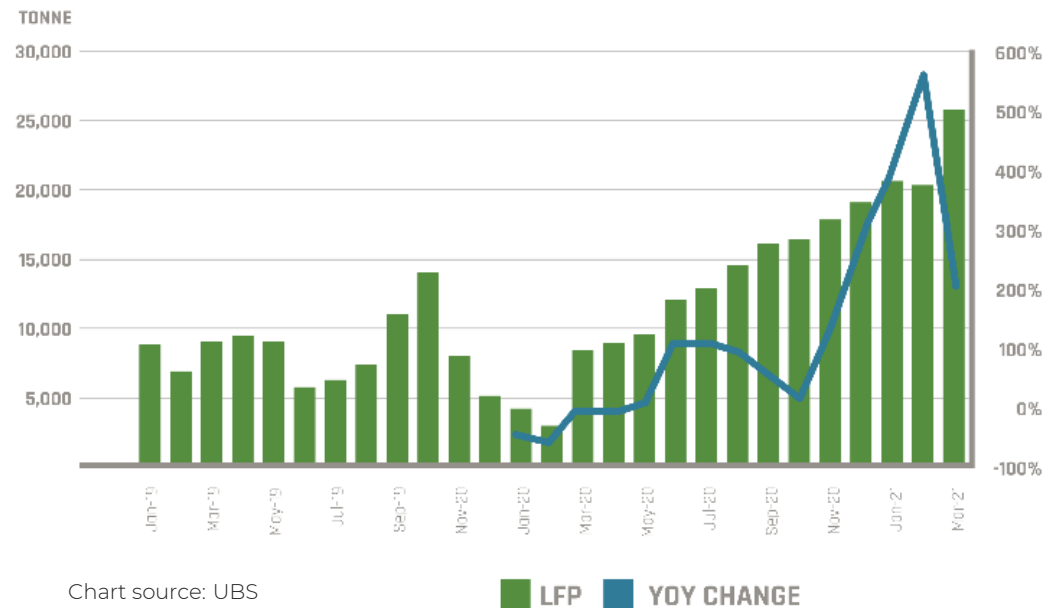
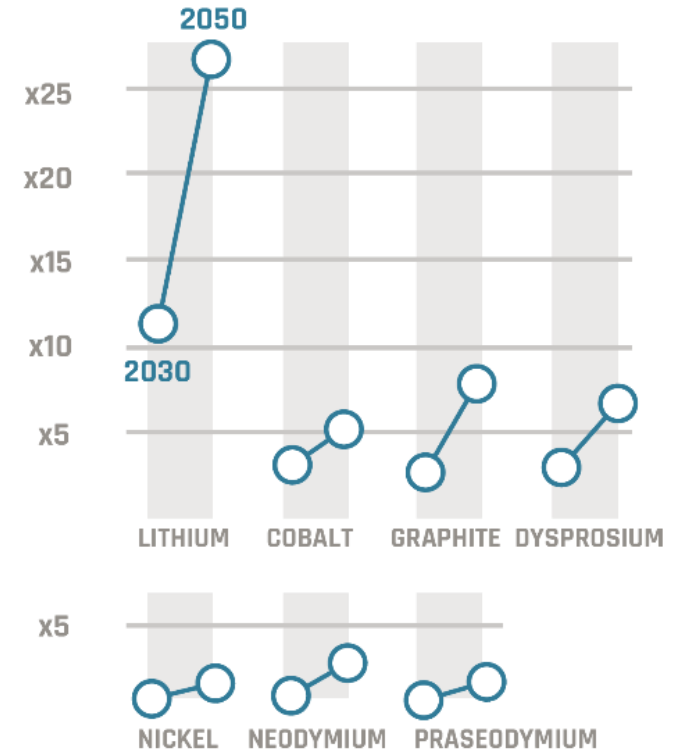


Chart source: UBS

Rising demand for materials needed for renewable energy and e-mobility

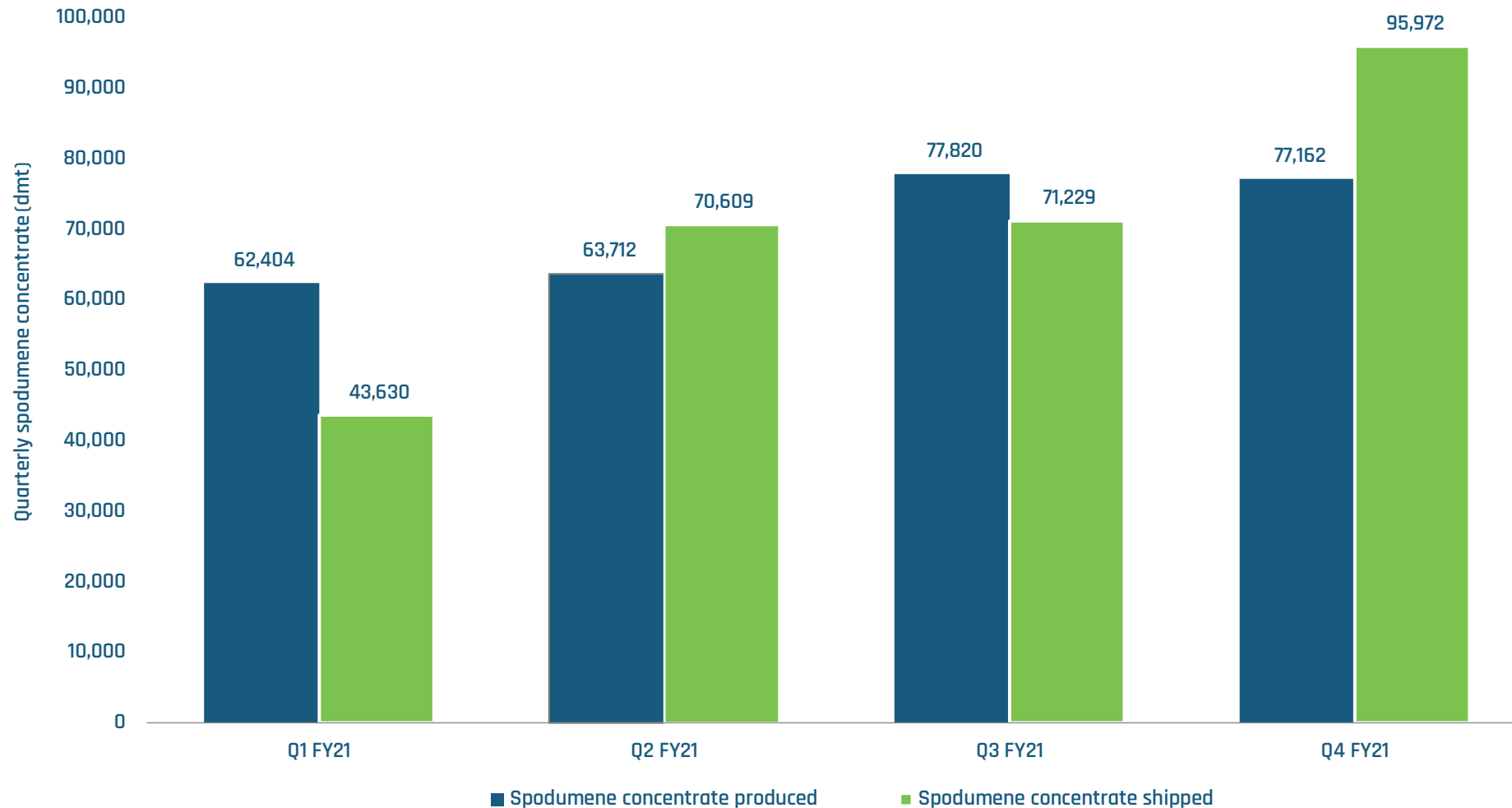
Future demand (2030 and 2050) as a multiple of current demand*



* Under a mid demand scenario
Source: European Commission

Rapid re-emergence from moderated production

Steady increase in production during second half of FY2021 in response to increasing customer demand. (FY2021 production 281.1kt, FY2021 shipments 281.4kt)



FY2021 Production and Sales

Spodumene concentrate

Produced –
281,098 dmt

Shipped –
281,440 dmt

Sales –
\$175.8M

FY2021 Financial Result

Cash Gross Margin of
\$46.2M²

Positive FY2021 EBITDA of
\$21.4M

- \$55.3M improvement compared to FY2020 EBITDA loss of (\$33.9M)

Unit Cash Operating Cost
\$519/dmt CIF China³
(US\$389/dmt at FX rate of 0.75).

Net Loss After Tax of
\$51.4M

- compared to FY2020 loss of (\$99.3M)

Result Impacted by:

- Improved margin from operations
- Altura acquisition costs expensed - \$17.1M
- Non-cash derivative fair value movement expense - \$12.6M
- Nordic Bond call premium - \$5.9M

FY2021 Balance Sheet

\$115.7M of Cash

FY21 cash balance of \$99.7M+
\$16M LOC's. (FY2020: \$86.3M
cash +\$0M LOC's)¹

US\$110M Debt

Senior secured debt facility
(successful low cost re-financing
completed during FY2021)

\$240.2M Equity Raise

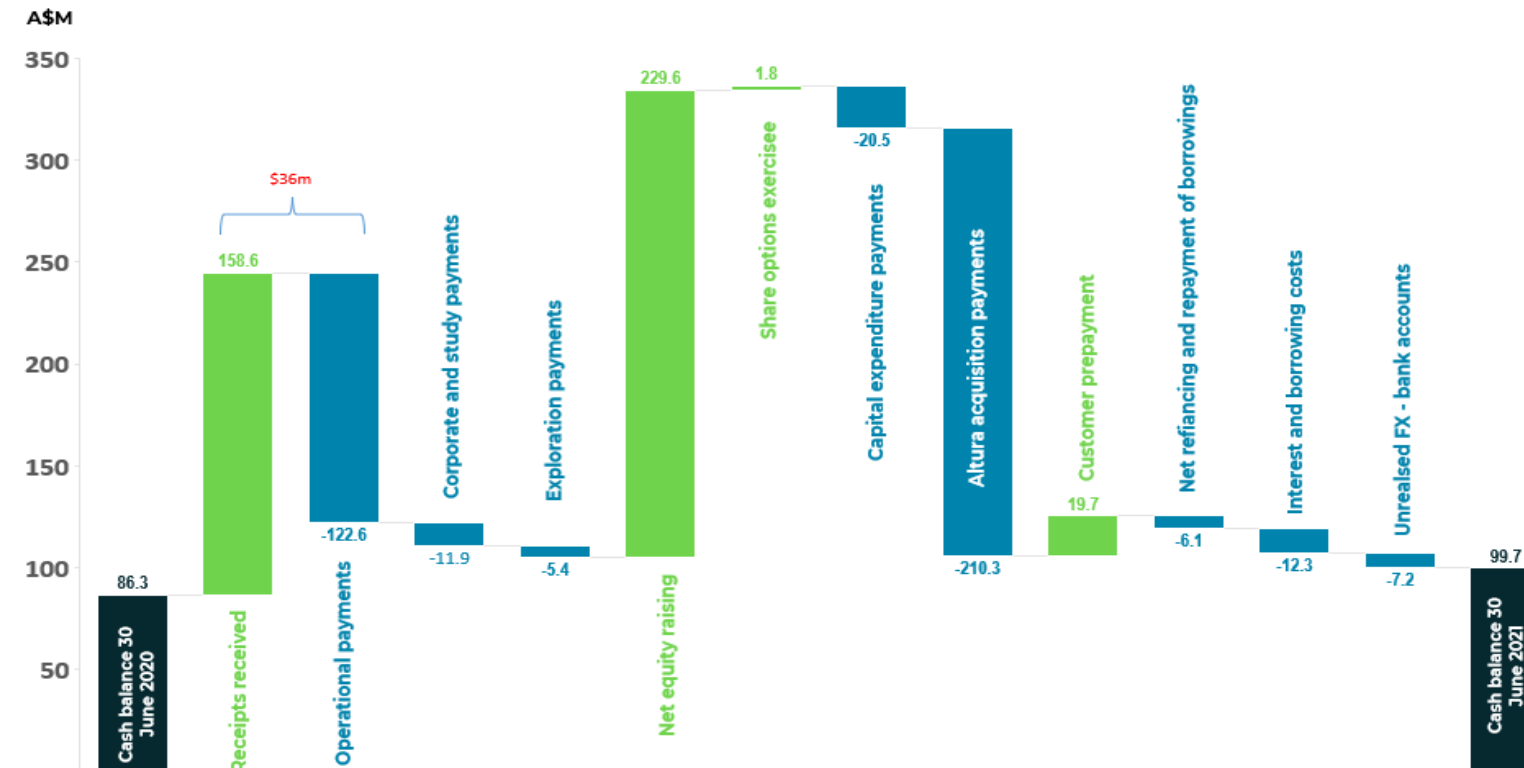
Altura acquisition -equity
raised

¹ LOC – irrevocable Letter of Credit for shipments completed prior to 30 June balance date

² Cash gross margin represents the operating margin from the Pilgangoora Project's operation before depreciation and amortisation expenses. It is an unaudited, non-IFRS measure that, in the opinion of the Company's directors, provides useful information to assess the financial performance of the Company over the reporting period. A reconciliation of cash gross margin to statutory net loss is included in the Annual Financial Report (Review of Operations).

³ Cash operating costs include mining, processing, transport, state and private royalties, native title costs, port, shipping/freight and site based general and administration costs and are net of Ta₂O₅ by-product credits. Cash operating costs are calculated on an incurred basis (including accruals) and includes inventory movements.

Cash Flow Waterfall¹



Cash balance increased by \$13.4M to \$99.7M at 30 June 2021.

Significant cashflow movements:

- net \$36.0M inflow associated with operating activities (being receipts of \$158.6M and costs paid to suppliers and employees of \$122.6M);
- corporate expenses and feasibility study costs \$11.9M;
- cash proceeds of \$229.6M (net of costs) from the equity raising to fund the Altura Lithium Project acquisition;
- Altura Lithium Project acquisition payments \$210.3M;
- \$25.9M on capital expenditure and exploration activities;
- interest and borrowing costs (including leases) \$12.3M;
- share options exercised \$1.8M;
- Yibin Tianyi customer prepayment \$19.7M (US\$15M);
- net refinance and lease repayments of \$6.1M, following Nordic Bond facility refinance with US\$110M finance facility provided by BNP Paribas and CEFC; and
- foreign currency loss of \$7.2M on US denominated cash reserve from the strengthening AUD:USD exchange rates. The AUD: USD spot rate as at 30 June 2021 was \$0.7518 (30 June 2020 \$0.6863).

¹ The 30 June 2021 cash balance of \$99.7M excludes \$16M of irrevocable letters of credit (30 June 2020: \$86.3M). Including the letters of credit, the cash balance is \$115.7M, an overall improvement of \$29.4M on the equivalent prior year balance of \$86.3M as at 30 June 2020.

FY2022 Guidance

Production and Sales

Spodumene Concentrate

Forecast production -

460-510,000 dmt

Forecast shipments -

440-490,000 dmt

Unit Cash Operating Cost

FY2022 Guidance

A\$525-A\$575/dmt CIF China (US\$395 -US\$430/dmt¹)

Costs are expected to be higher during FY2022 and FY2023 due to elevated strip ratios, Pilgan production ramp up, and restart of Ngungaju operation (expected production target of 560-580,000 tpa by mid-CY2022).

¹ at an AUD:USD exchange rate of 0.75

Target beyond FY2023

A\$450-A\$500/dmt CIF China (US\$340-US\$375/dmt¹)

Costs are expected to decrease once strip ratios moderate, nameplate production capacity is achieved, throughput increases, better utilisation rates are achieved, and synergies are won from the combined operation.

Capital Expenditure - FY2022

Ngungaju Plant Restart - \$34.6M

- Remaining capital \$22.8M and operations readiness \$11.8M

Pilgan Plant improvements - \$9.8M

- Remaining costs to increase capacity to ~360-380,000 tpa

Pilgan Plant Capital Projects - \$9.7M

- TMF cell two raise, renewable energy, product handling, NPI

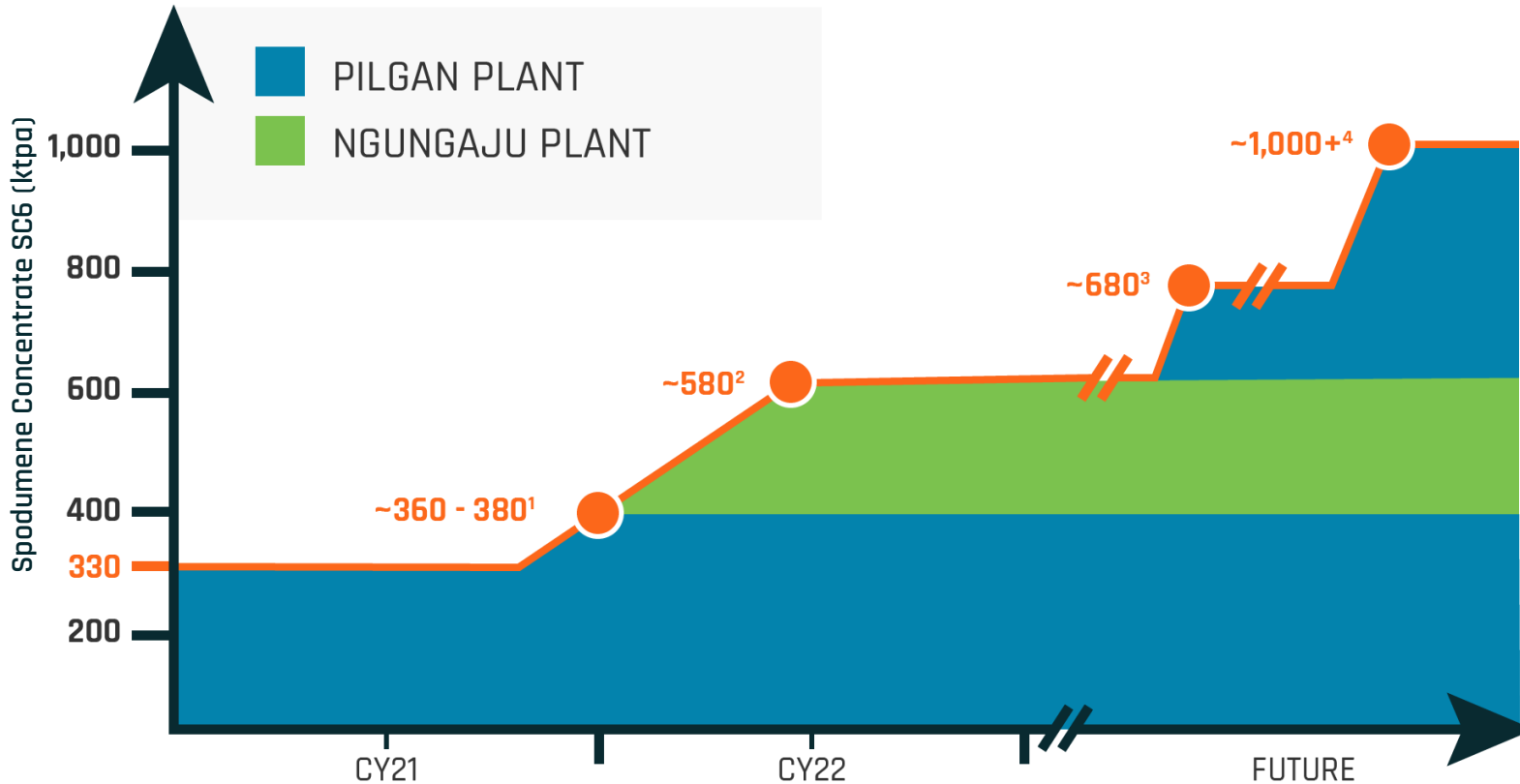
Sustaining capital - \$6.5M

Waste Mine Development

Higher mining strip ratios will be required to advance Central and South pit development to access sufficient ore to support higher plant throughput. Final guidance on capitalised mine development costs for FY2022 will be provided post completion of the upcoming combined and updated Reserve statement, which will represent the expected mine plan for the integrated operations.

Upstream expansion strategy

Flexible growth pathway to capture growing demand in the market and increase revenue



Pilgangoora asset supports:

- phased expansion up to and beyond ~1Mtpa in in production capacity
- potential for other value-added lithia based product streams

Expansion timing to be guided by:

- market conditions (including overall demand and price outcomes)
- strategic customer requirements

¹ Production capacity uplift subject to successful construction and commissioning completion of the Pilgan Plant improvement project.

² Production capacity uplift subject to successful restart of the Ngungaju processing plant.

³ Production capacity uplift subject to completion of studies and FID for the first expansion of the Pilgan processing plant (previously termed Stage 2 – Phase 1).

⁴ Production capacity uplift subject to completion of studies and FID for the first expansion of the Pilgan processing plant (previously termed Stage 2 – Phase 2 and 3).

Note A: The abovementioned expansions in production capacity of the Pilgan Plant and Ngungaju Plant are underpinned by the Company's existing Ore Reserves for the Pilgan Operation that have been prepared by a Competent Person in accordance with the JORC Code (2012 Edition) and were released by the Company to ASX on 17 September 2018 (Pilgangoora Reserve and Resource Upgrade) and as updated in the Company's 30 June 2020 Annual Report . The relevant proportions of proven Ore Reserves and probable Ore Reserves that underpin the production targets are 17% proven Ore Reserves and 83% probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in that release or report and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed.

Note B: The JORC Resource and Reserves estimates previously stated in the ASX announcement by Altura Mining Limited dated 9 October 2019 in respect of the Ngungaju Operation are currently under review by the Company and the Company will use its own economic assumptions and modifying factors. These and other factors may result in changes (including the possibility of reductions) in the Mineral Resources and Ore Reserves estimates previously stated by Altura Mining Limited. The Company expects to release an update to the market in the September Quarter 2021.

Battery Material Exchange (“BMX”) Summary

BMX¹ -Inaugural online auction of spodumene concentrate delivers outstanding success

10,000 dmt spodumene concentrate (SC5.5%) cargo

62 online bids from 17 independent buyers during three-hour auction window

five individual groups bid \geq US\$1,100 /dmt FOB
winning bid =US\$1,250 /dmt FOB

Letter of Credit presented and vessel loaded early September



BMX² -Second online auction of spodumene concentrate delivers **almost twice the price**

8,000 dmt spodumene concentrate (SC5.5%) cargo

48 online bids from 13 independent buyers during two-hour auction window

four individual groups bid \geq US\$1,750 /dmt FOB with the winning bid =US\$2,240 /dmt FOB

Letter of credit to be presented for vessel loading in November

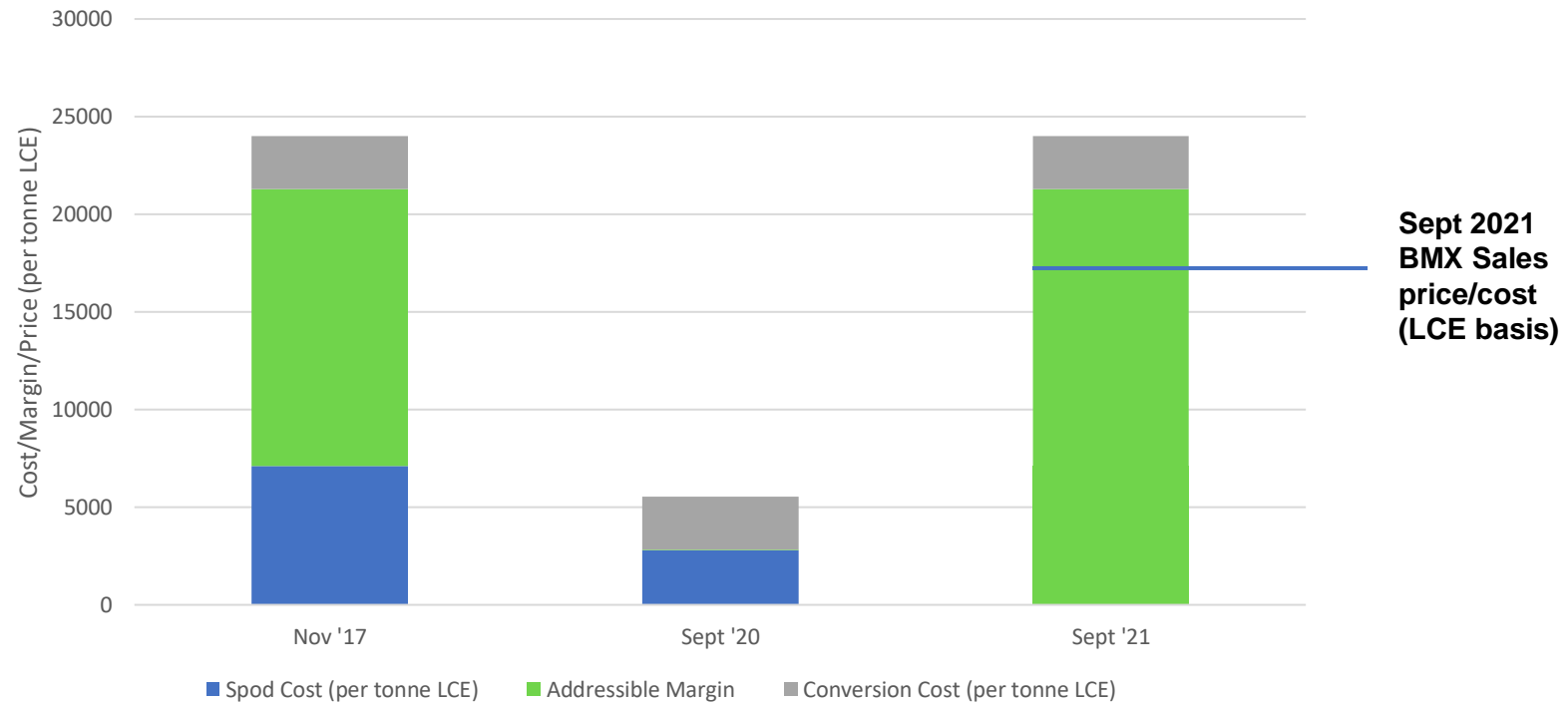
BMX¹ – lithia adjusted on a pro-rata basis SC6.0 equivalent price CIF is US\$1,429 including freight costs

BMX² – lithia adjusted on a pro-rata basis SC6.0 equivalent price CIF is ~ US\$2,500 including freight costs

GLX platform designed to efficiently support the 'spot sales' market opportunity

Where excess demand/tight supply exists, there is an opportunity to win further margin in spodumene sales

Battery Grade Chemicals Price (Ex-Works China) vs Contributing Cost

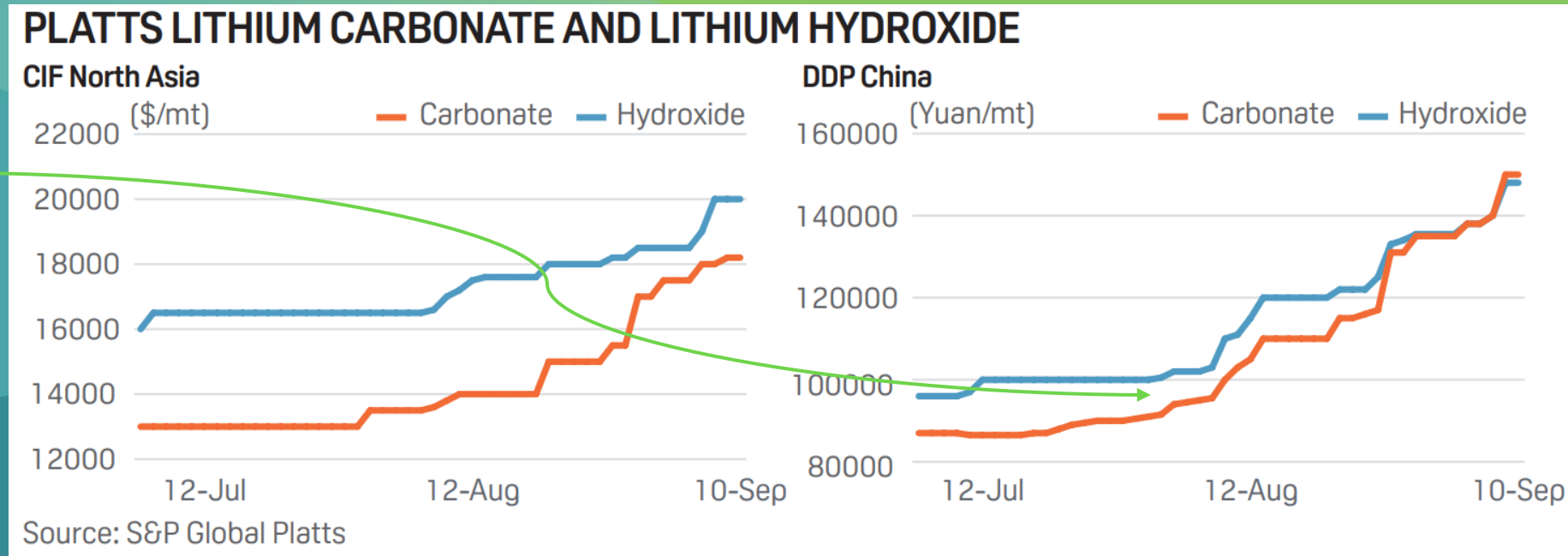


Pilbara Minerals estimates, based on independent pricing evaluation (Platts/FastMarkets) as at dates noted above. Spodumene cost per tonne defined by historical market precedent, stated on an LCE basis.

Current market pricing

On the 29th of July 2021, Pilbara Minerals held its inaugural BMX auction of 10kt SPC 5.5% and achieved a price of US\$1,250/dmt (FOB).

Equivalent to USD\$1,400⁺/dmt (SC6.0, CFR China basis)



A diversified product suite

Positioning to capture value throughout the entire lithium raw material and chemical supply chain

Upstream



**Spodumene
Concentrate 6% Li₂O**

Pilgangoora
Operation

Offtake

Spot sales

Midstream



**Lithium Salts
>35% Li₂O**

Scoping Study
with Calix

Sales

Downstream

Downstream



**Lithium Fine
Chemicals**

e.g. Potential JV
with POSCO

Further partnering
downstream in fine
chemicals

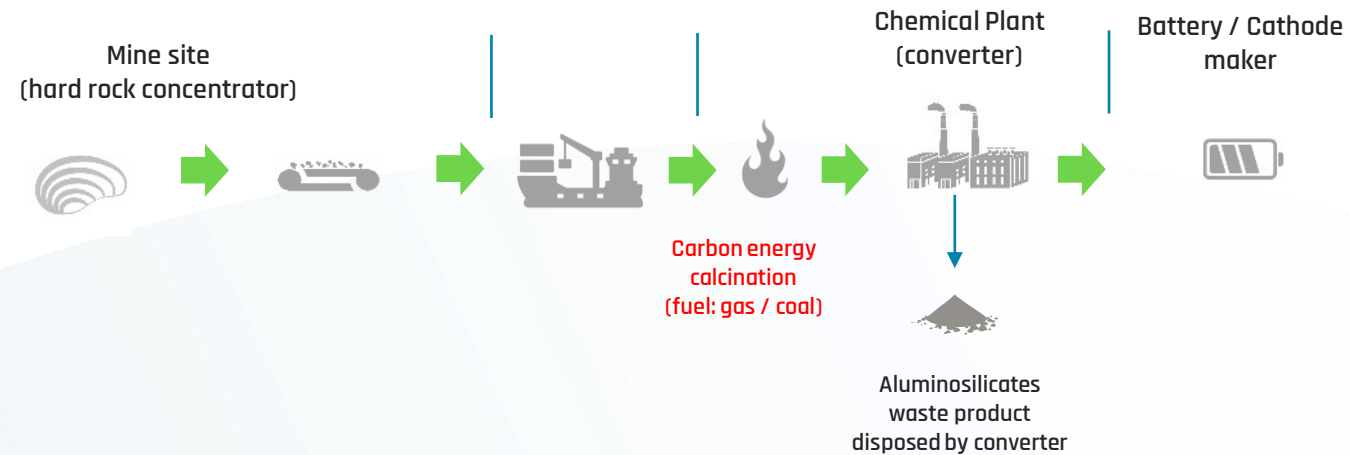
Midstream - JV with Calix (ASX:CXL) Exploring Value-Added Green Products (Lithium Salts)

Conventional spodumene supply chain:

- Carbon intensive
- Aluminosilicates shipped to customer (>90% of export mass)
- Spodumene concentrate SC6.0
 - 6.0% Li_2O (2.80% lithium metal by mass)



Left: Spodumene coarse concentrate

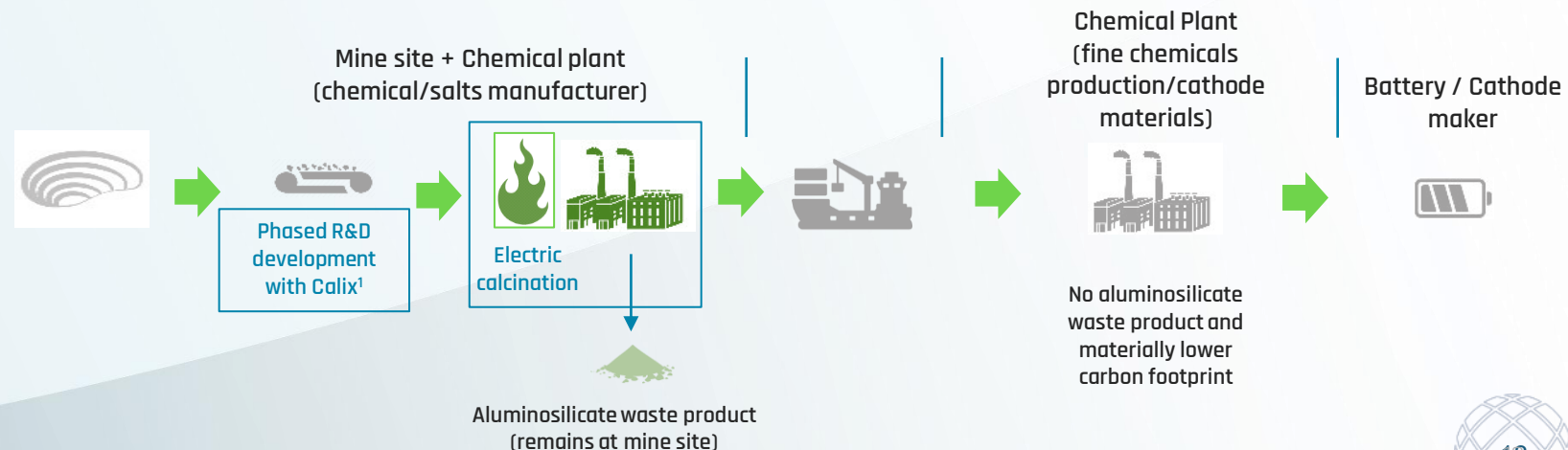


Alternate spodumene supply chain:

- Reduced carbon intensity
- Aluminosilicate waste remains at mine site
- Lithium salts shipped
 - >35% Li_2O (>15% lithium metal by mass)



Left: Lithium salts



¹Lithium chemical development proposed Joint Venture with Calix Limited is detailed in the ASX announcement "Pilbara Minerals targets "Midstream Lithium Chemicals Opportunity with Calix" released on 11 May 2021



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Minerals**

Powering a sustainable energy future

Thank you.

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