Black Rock Mining
Mahenge Graphite Mine

Simply Better Graphite: Investor Update

Africa Down Under

September 2023

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MINING LIMITED

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The information in this report that relates to estimates of Mineral Resources and Ore Reserves has been extracted from the Company's ASX announcement released on 3 February 2022 titled "BKT Confirms 25% increase in Measured Resources." The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates of Mineral Resources or Ore Reserves in the original market announcement continue to apply and have not materially changed.

Production Target

The information in this report that relates to a production target, or forecast financial information derived from a production target has been extracted from the Company's ASX announcement released on 10 October 2022 titled "Black Rock Completes FEED and eDFS Update". The Company confirms that all material assumptions underpinning the production target, or forecast financial information derived from the production target, in the original announcement continue to apply and have not materially changed.

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Black Rock and the Mahenge Graphite Mine

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Black Rock at a glance

Premium graphite player

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Developing the Mahenge graphite project in Tanzania:
- Tier 1 scale (2nd largest reserve globally)
- First quartile costs due to hydro-dominated grid power
- Very low carbon-footprint products (decarbonisation)

Backed by largest ex-China anode producer POSCO:
- Strategic Alliance: BKT's major shareholder
- Module 1:
    - LOM offtake for fines + providing US$10m prepay
- Module 2: Non-binding MOU with POSCO Sept 2023:
    - Rights to LOM fines for Module 2 in exchange for
    - Investment in BKT: The lower of US$40m or 19.99%[1]

All key Govt agreements and permits in place

Debt process well advanced
- Aiming for credit-approved Term Sheets in Q3 CY23

Substantial upside potential if BKT team can execute:
- Mahenge NPV_{10} US$1.4bn (A$2.1bn)[2]

[1]Proceeds to fund the development of Module 1.
[2]Project metrics updated October 2022. NPV post-tax, post Govt 16% free carry. More detail on Slide 9.

Capital structure	
ASX ticker	**BKT**
Share price (1 Sept 2023)	$0.096
Shares on issue	1,097.1 M
Options and performance rights	58.2 M
Market capitalisation (undiluted) (@$0.096)	A$105 M
Cash (30 June 2023)	A$11.7 M
Debt (30 June 2023)	Nil

Major shareholders	
POSCO Group	12%
Copulos Group	11%

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Black Rock team

Board of Directors

Richard Crookes, Non-exec Chairman: Geologist with over 30 years executive experience in the resources and finance industries; raised capital and financed a number of projects globally, including across Africa. Previous roles include Investment Director at Mining PE Fund EMR Capital, Executive Director in Macquarie's Metals & Energy Capital and Chief Geologist / Mining Manager at Ernest Henry Mining.

John de Vries, MD & CEO: Mining Engineer with over 35 years experience in mine development and operations; professional experience spans Africa, the Pacific, the former Soviet Union, North and South America and Australia. Previously General Manager Technical Services with St Barbara, integral in the 2014 turnaround; earlier operational management roles at BHP Nickel West, Orica Mining Services and Western Mining Corp.

Ian Murray, Non-exec Director: Finance Executive with over 20 years corporate experience in the publicly listed resources sector; led highly successful project developments, major acquisitions, company restructures and stock exchange listings. Previous roles include CEO of Gold Road Resources, CEO and CFO of DRDGold Ltd, Director of Rand Refinery Ltd and GoldMoney.com, and senior positions at KPMG, PwC and Bioclones.

Management

Steuart McIntyre, GM Corporate Development: Mining analyst with over 15 years experience. Previous roles include sell-side mining analyst for Royal Bank of Canada and Blue Ocean Equities and associate at Cutfield Freeman, a mining-focused corporate finance boutique in London. Steuart has degrees in Civil Engineering and Commerce from the University of Sydney and a diploma of corporate finance from the London Business School.

Daniel Pantany, GM Engineering & Technical: Civil Engineer with over 22 years experience in mining project development in Africa and Australia across a broad range of project delivery roles including EPCM, EP, and lump sum EPC contracts. His most recent position was with CPC Engineering including secondment as Project Engineering Manager for Syrah's Balama project. BKT's Study Manager for Mahenge since 2018.

Paul Sims, CFO: A highly credentialled finance resources executive with over 25 years of executive experience in the resources industry, spanning both commercial and financial roles at BHP, Western Mining Corp, Minara Resources and Karara Mining. Mr Sims has extensive experience in debt finance, project management and cost control. He has a Bachelor of Business degree from Curtin University and is a Fellow of CPA Australia.

Greg Wheeler, CCO: An experienced finance and commercial manager who started his career within PwC and spent 10 years with ship manufacturer Austal, where he was responsible for managing the Finance, Accounting, IT and HR functions of the global business. Mr Wheeler then joined global trading and shipping player Wellard during a period of strong growth, including public listing and was responsible for financial systems and processes.

Rae Wyatt, GM People, Culture & Sustainability: Experienced HR professional with 15 years experience in the resources industry, specialising in project development and stakeholder engagement with communities. Ms Wyatt has most recently held senior roles at Clean TeQ (Sunrise Metals), Gold Road and Macmahons. She has a degree in commerce from Curtin University in HR and Industrial Relations and is a graduate of AICD.

Graphite in batteries

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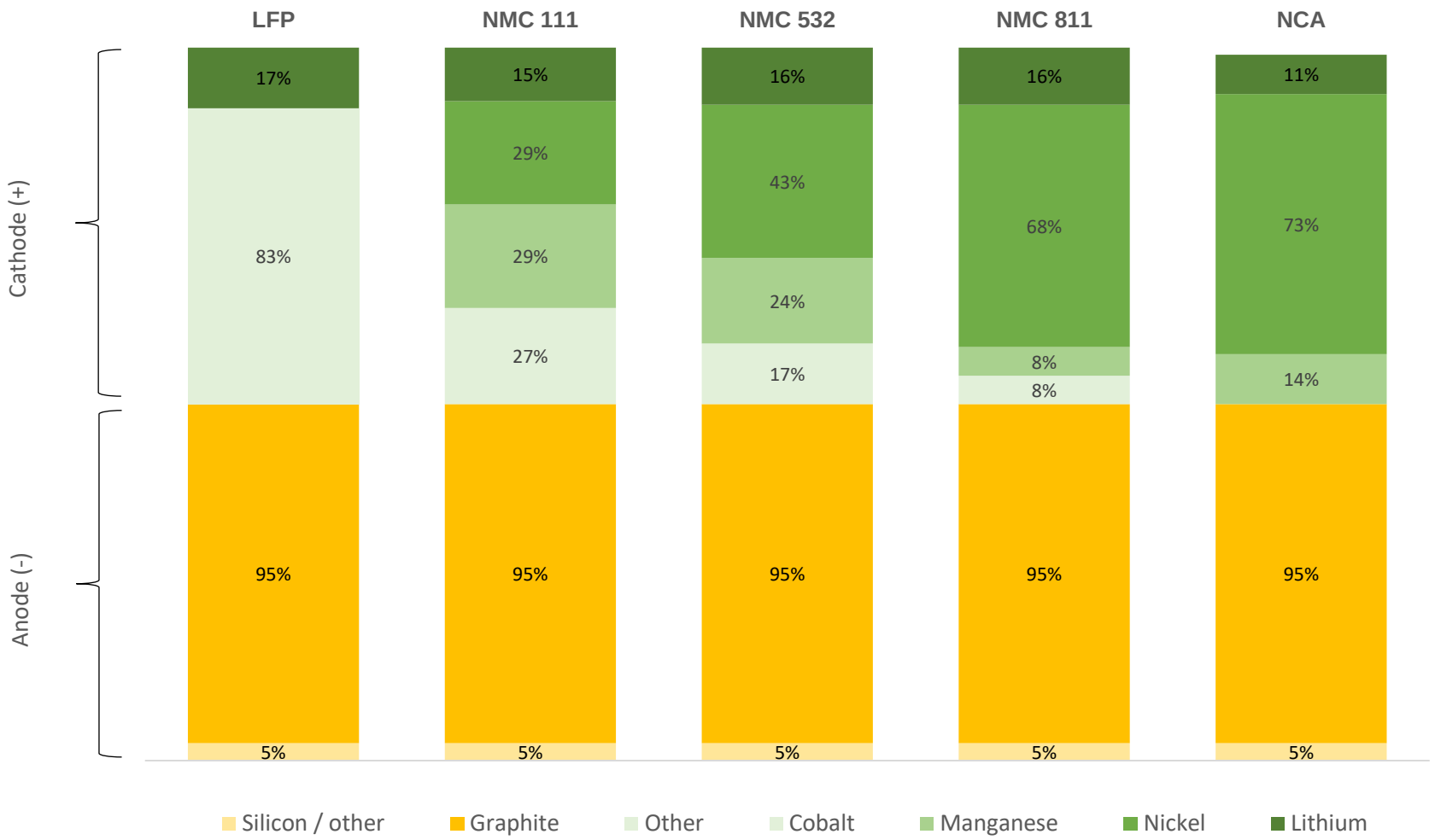
There is more graphite in Li-ion batteries by volume than any other material, regardless of battery chemistry.

Li-ion batteries typically contain ~7-10x more graphite than lithium

Graphite is the dominant anode material, regardless of battery chemistry



Source: Pallinghurst-Traxys battery analysis. %s represent the proportions of cathode and anode in each battery respectively. NCA batteries contain 2% aluminium (not shown)

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Battery demand for graphite at a tipping point?

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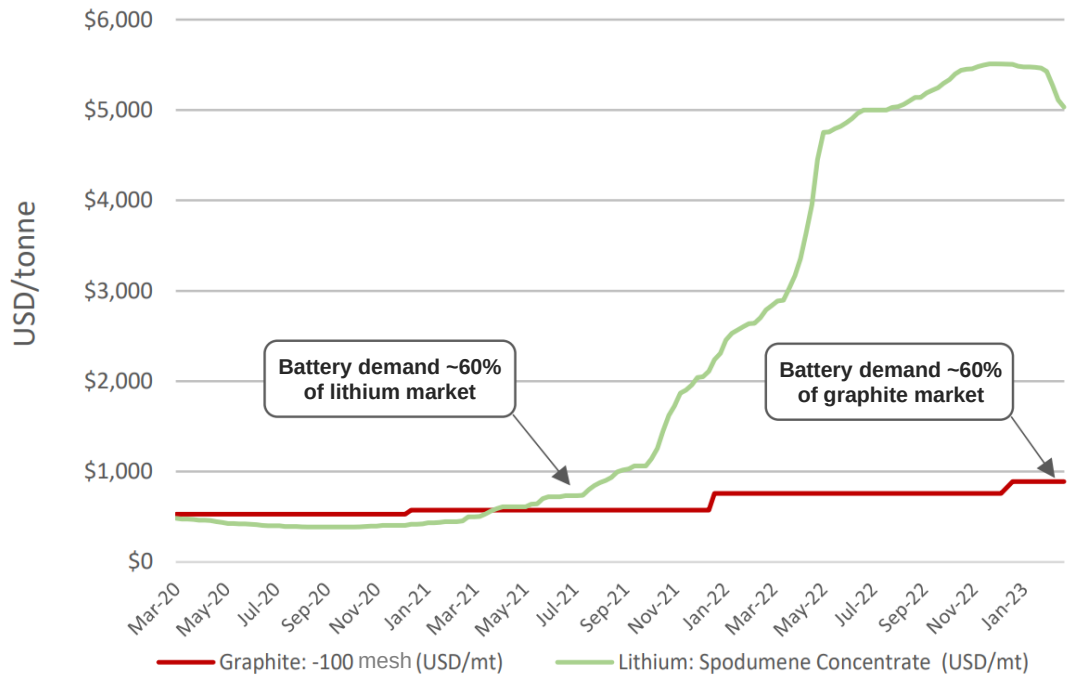
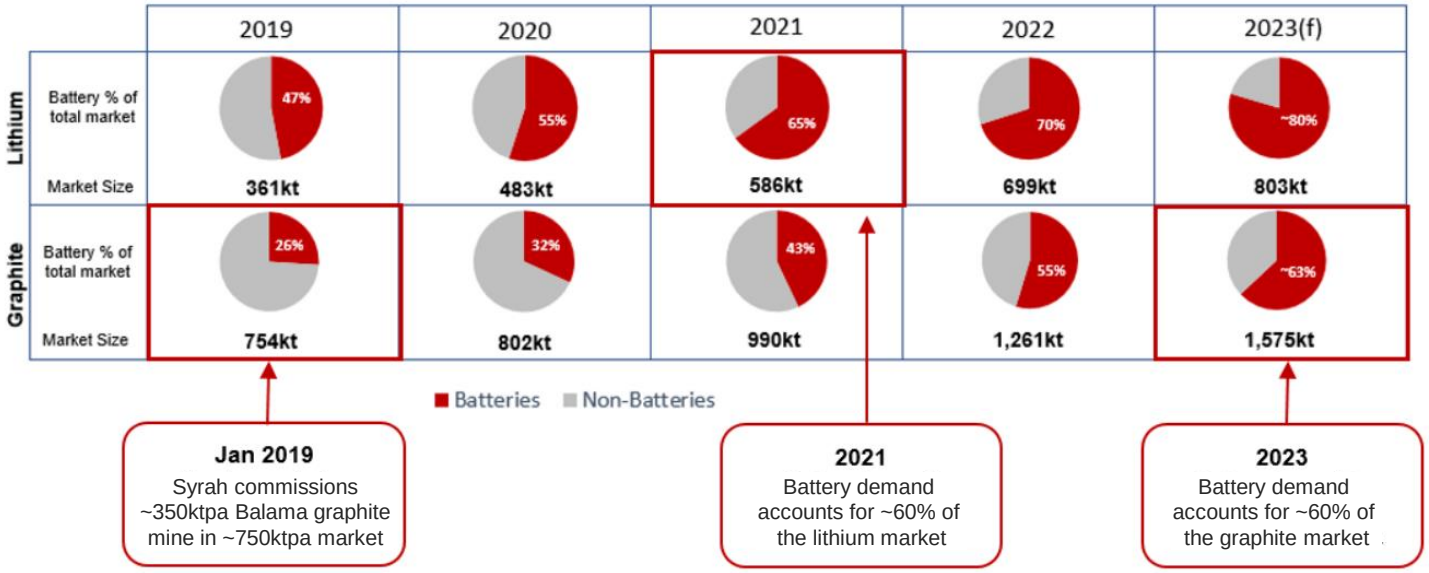
Battery demand for graphite expected to hit ~60% in 2023

Could battery demand start to drive graphite pricing from 2023?





Source: MST Financial, Benchmark Mineral Intelligence, Black Rock Mining

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Robust graphite prices

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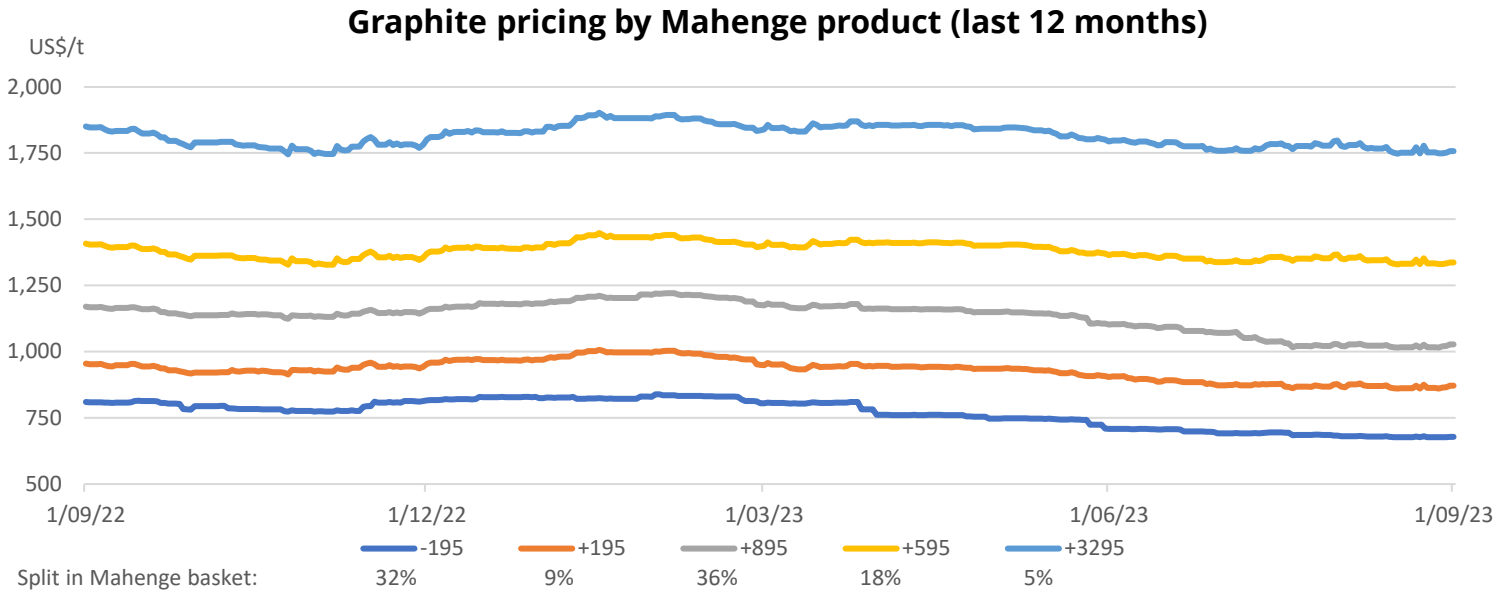
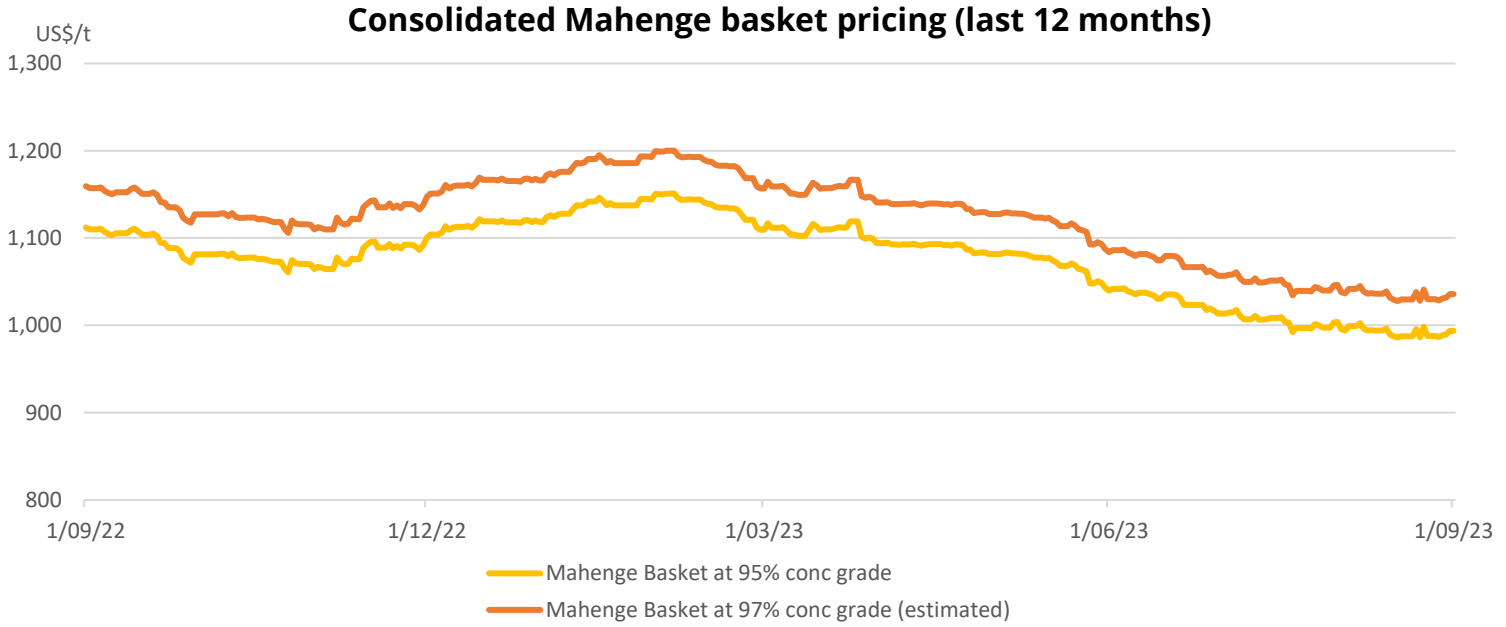
Current graphite prices support healthy potential margins at Mahenge given forecast AISC of US$518/t



Source: RefWin, Asian Metals, ICC Sino, Black Rock Mining



Source: RefWin, Asian Metals, ICC Sino, Black Rock Mining

BKT sensitivity: 10% increase in basket price = 20% increase in unlevered NPV

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A snapshot of the Mahenge Graphite Project

Simple open pit mine development with outstanding forecast returns[1]

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US$1.4B
$NPV_{10\ nom}$ post tax, post 16% FC

36%
Post-tax, ungeared IRR

89ktpa
Module 1 production* (1Mtpa)

US$182M
Module 1 development capex*

347ktpa
Steady production (4 x 1Mtpa)

95 – 99%+ TGC purity
59% +80 mesh, 41% -80
Concentrate product

US$1,709/t
Basket graphite price***

US$518/t
All-In-Sustaining-Cost**

26 years
Initial operating life

[1]See Black Rock ASX release dated 10 October 2022, Black Rock completes FEED and eDFS Update. All technical parameters, including in the estimation of Mineral Resources or Ore Reserves, underpinning the estimates continue to apply and have not materially changed. The estimated Ore Reserves and Mineral Resources underpinning the production and financial forecasts were prepared by Competent Persons in accordance with the requirements in Appendix 5A (JORC Code).
*Excludes US$33m to upgrade the power line which the Company is contemplating building on behalf of TANESCO, the Tanzanian Govt power authority. Power costs are likely to be ~US8c/kWh less a meaningful rebate to recoup the costs of the power line. Forecast Capex has been classified as a Class 2 estimate with accuracy of ±10% as defined by AACE. **Average over first 10 years. ***Expert Consensus based on the average forecast from Benchmark Mineral Intelligence, Fastmarkets and Wood Mackenzie over the first 10 years.

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First quartile on the global cost curve

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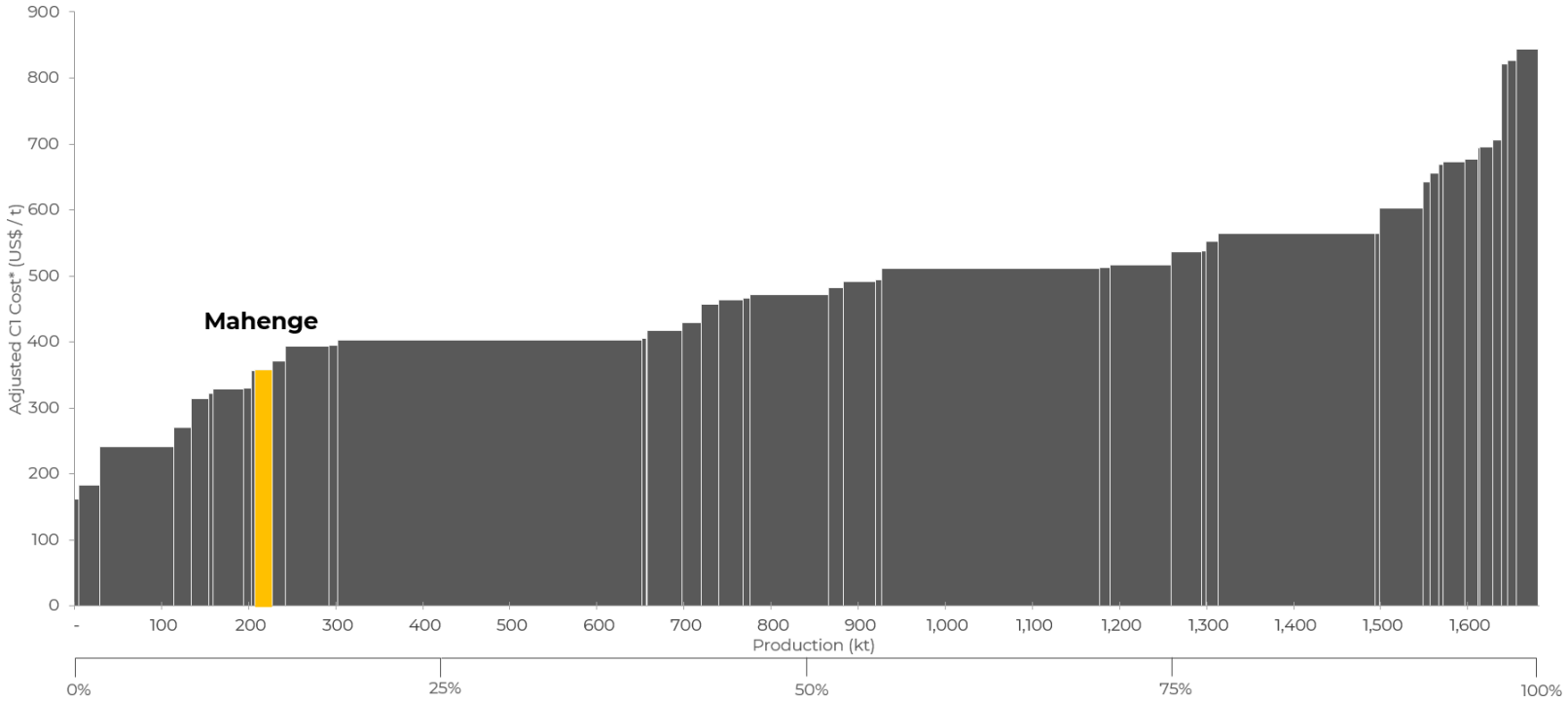
First quartile assets are higher margin and more robust through the cycle

2024 Adjusted C1 Cost Curve*



Sources: Benchmark Mineral Intelligence Flake Graphite Report Q2 CY22, Black Rock Mining, Company Data
C1 Cash Costs are defined as Cash Costs excluding royalties and sustaining capex.
*C1 Costs adjusted for flake size distribution: Based on forecast pricing for 94-95% in 2024, Mahenge's average price is forecast to be US$107/t above the peer average due to a higher proportion of large flake. Mahenge's Adjusted C1 Costs of US$359/t are based on C1 Costs of US$466/t less the US$107/t for above average revenue compared to the peer group.
Ignores the benefit of Mahenge's higher purity concentrates of up to 98% which could potentially improve BKT's relative position by up to ~US$40-60/t per 1% above 95% pricing.

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Why Mahenge?

Unique competitive advantages driven by geology and substantial existing infrastructure

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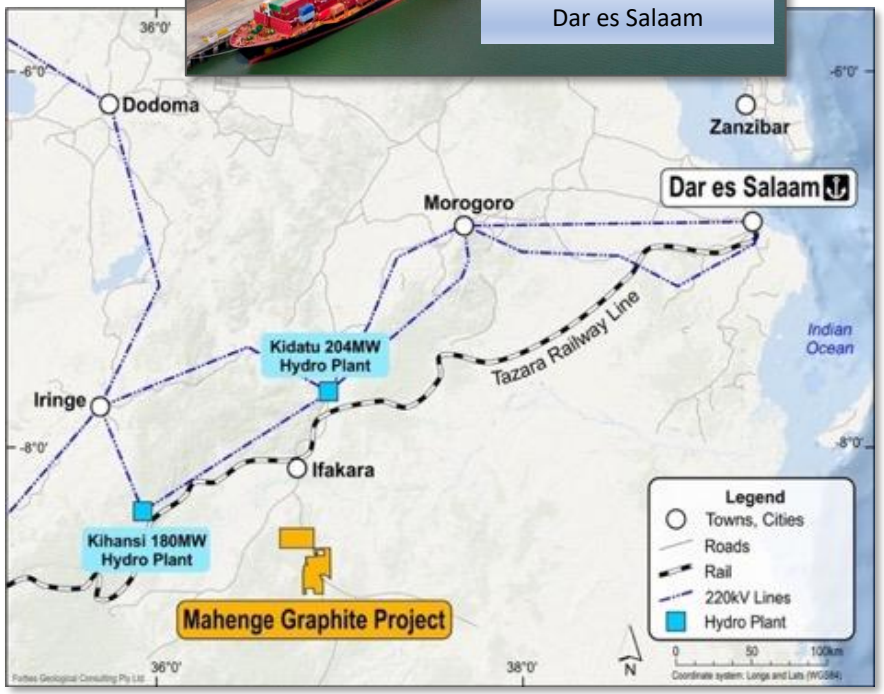
Julius Nyerere Hydropower Project (2115MW)

Large container port in Dar es Salaam

Tazara Railway Line



Geology

- ★ Mahenge's 213mt resource makes it the 4th largest graphite resource in the world[1]
- ★ Low deleterious impurities and favourable metallurgy means that Mahenge is able to produce up to 99% TGC concentrate purity, solely with conventional flotation processing

Substantial existing infrastructure

- ★ Access to key infrastructure, Grid Power, Rail, Airstrip, Water and Tailings disposal (dry stack)
- ★ Logistics advantages with processing through Dar es Salaam high volume container port

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ESG focused ecosystem

A new greener source of graphite with best practice whole of supply chain strategy

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posco

Tanzanian Government

EQUATOR PRINCIPLES

IFC International Finance Corporation WORLD BANK GROUP

Creating Markets, Creating Opportunities

ESG CERTIFIED

Digbee ESG™

Environmental and Social Impact Assessment

Battery

Large Flake

Customer Markets

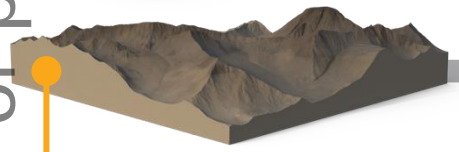
FARU GRAPHITE CORPORATION

Permitted

Robust Compliance

Simple Processing

- Three stage polishing
- No wet screen
- Low energy



Mahenge Graphite Deposit

- High-grade graphite
- Low deleterious elements
- Low strip ratio

Hydro Electric Power

- Low carbon power supply, and transport footprint

Dry Tailings

- Reduced footprint
- Eliminates risk of tailings dam failure
- Does not compete with local communities for water

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Graphite playbook

Sequential development that is customer driven

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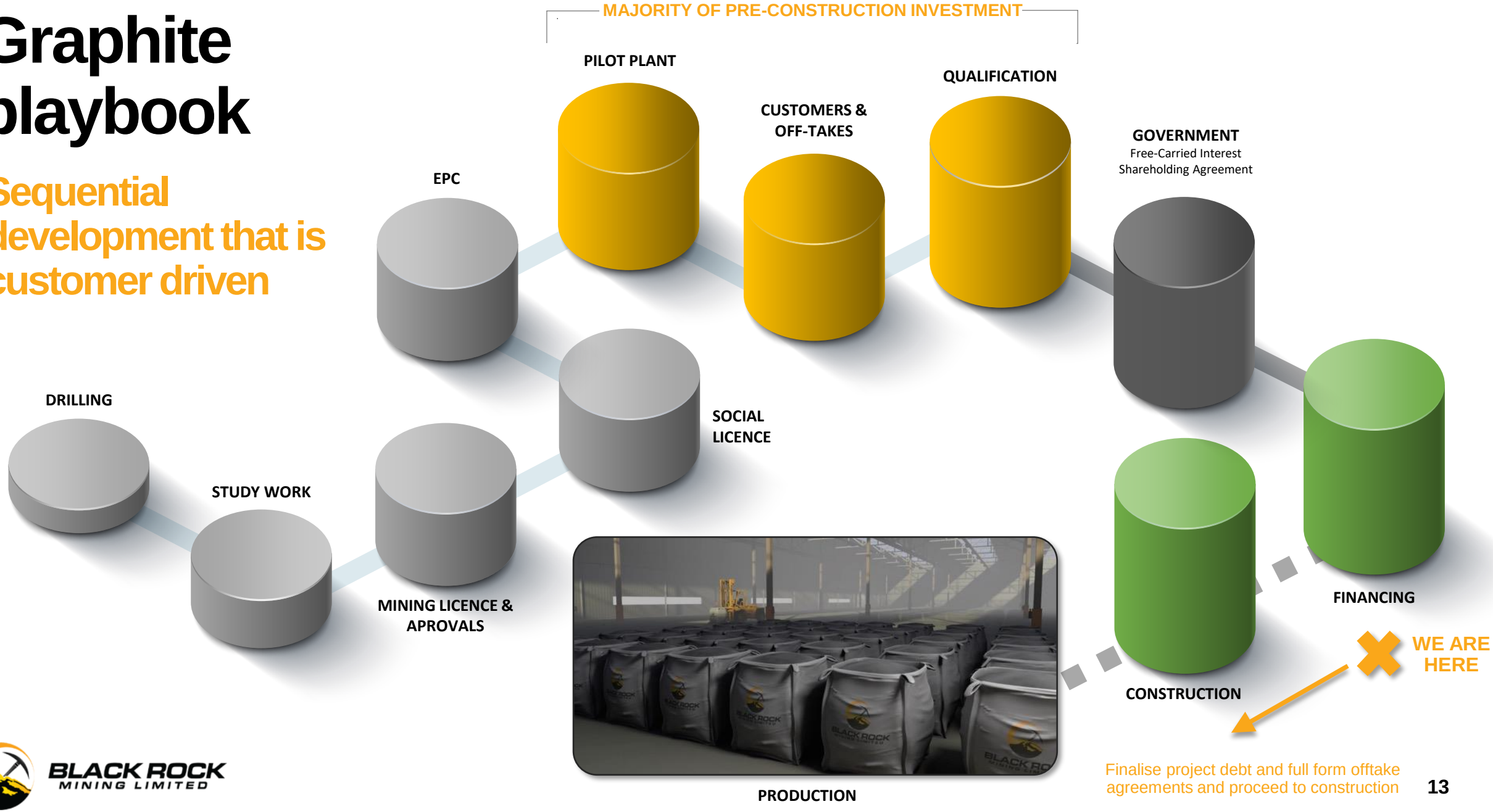

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Development timetable

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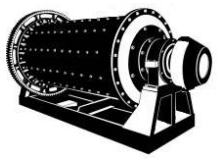
Aiming to have debt finance in place for Module 1 soon.

Early works expected to commence near term

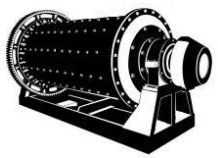
- Debt process well advanced, aiming for Term Sheets in Q3 CY23
- Black Rock is targeting up to 50% debt via traditional project finance
- Construction period 20 months[1]
- Targeting first production from Module 1 in CY25

Module 1
1mtpa



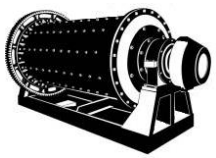
Capex US$182m[1]
Production 89ktpa+

Module 2
1mtpa



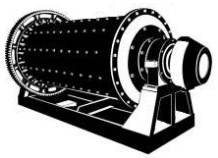
Capex US$107m[1]
Production 85ktpa+

Module 3
1mtpa



Capex US$117m[1]
Production 85ktpa+

Module 4
1mtpa



Capex US$104m[1]
Production 85ktpa+

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[1]Mahenge eDFS Update Oct 2022. Excludes initial US$33m for power line for Module 1. More detail on Slide 9.

Working towards an IRA-compliant supply chain

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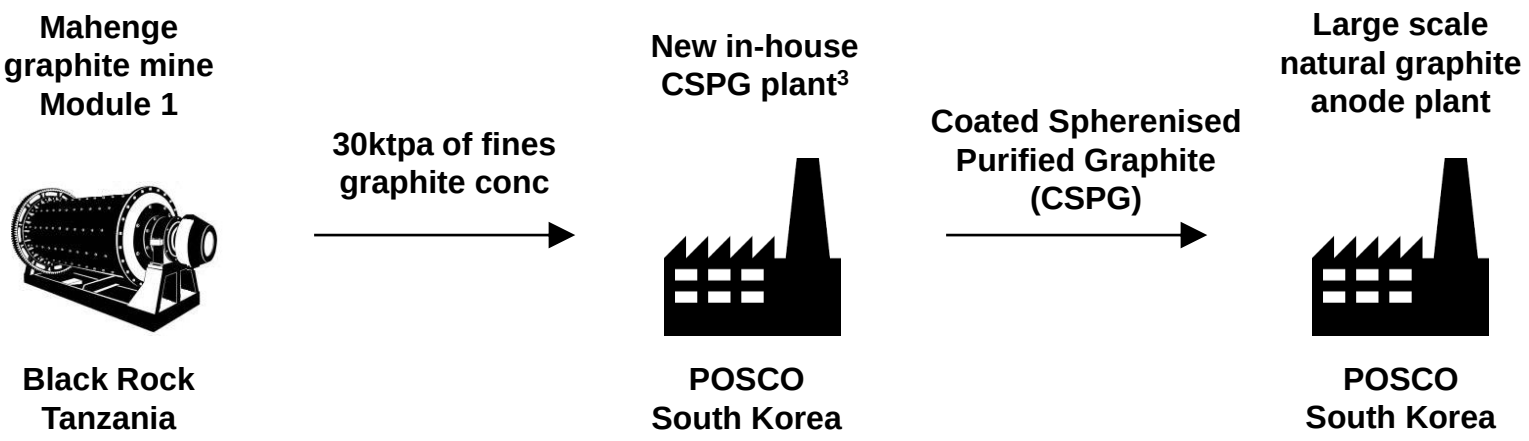
Black Rock is collaborating with POSCO to establish a new anode supply chain

The Inflation Reduction Act (IRA)[1] in the US provides a Clean Vehicle Credit under Section 30D[2] for qualifying vehicles for up to US$7,500 per vehicle

- *Starting in 2024, qualifying vehicles cannot have battery components manufactured or assembled by a foreign entity of concern*
- *Starting in 2025, qualifying vehicles' batteries cannot contain critical minerals extracted, processed, or recycled by a foreign entity of concern*



[1]Source: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf (Jan 2023, Version 2)
[2]Source: https://www.federalregister.gov/documents/2023/04/17/2023-06822/section-30d-new-clean-vehicle-credit (17 April 2023)
[3]Source: POSCO Holdings Battery Materials Business Value Day Presentation, Slide 41. POSCO has committed to building its own SPG capacity in-house. Video available here: https://youtu.be/GFwivqfKXhU

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POSCO's anode growth plans

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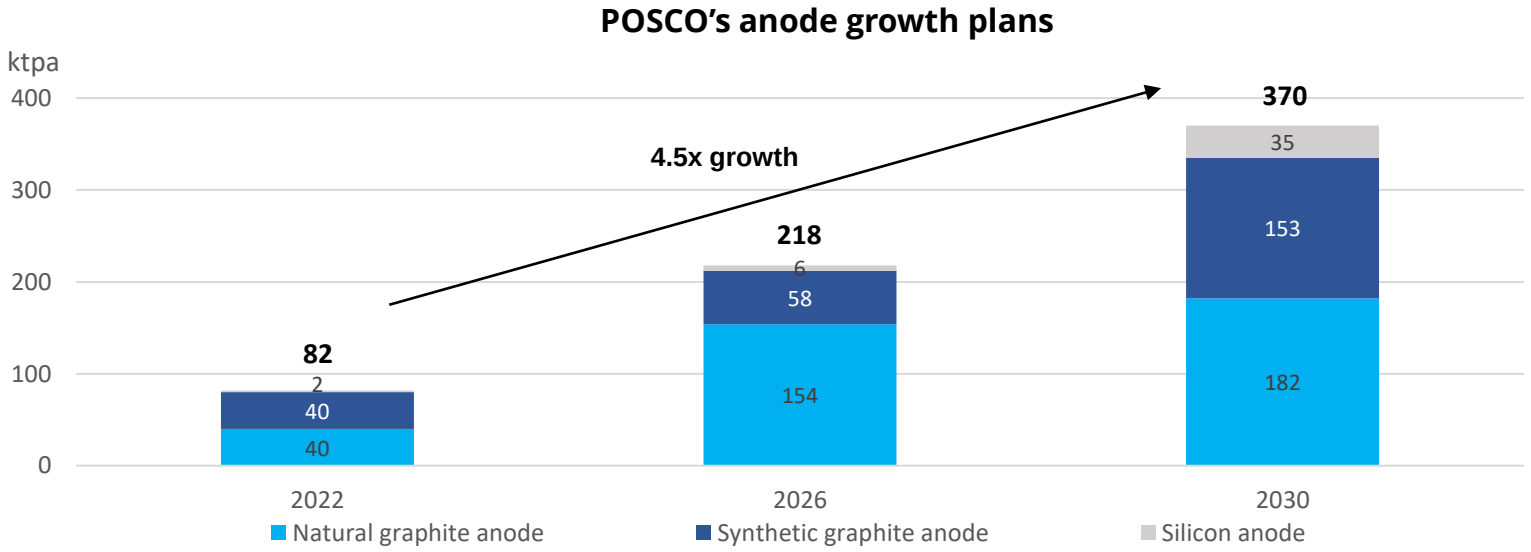
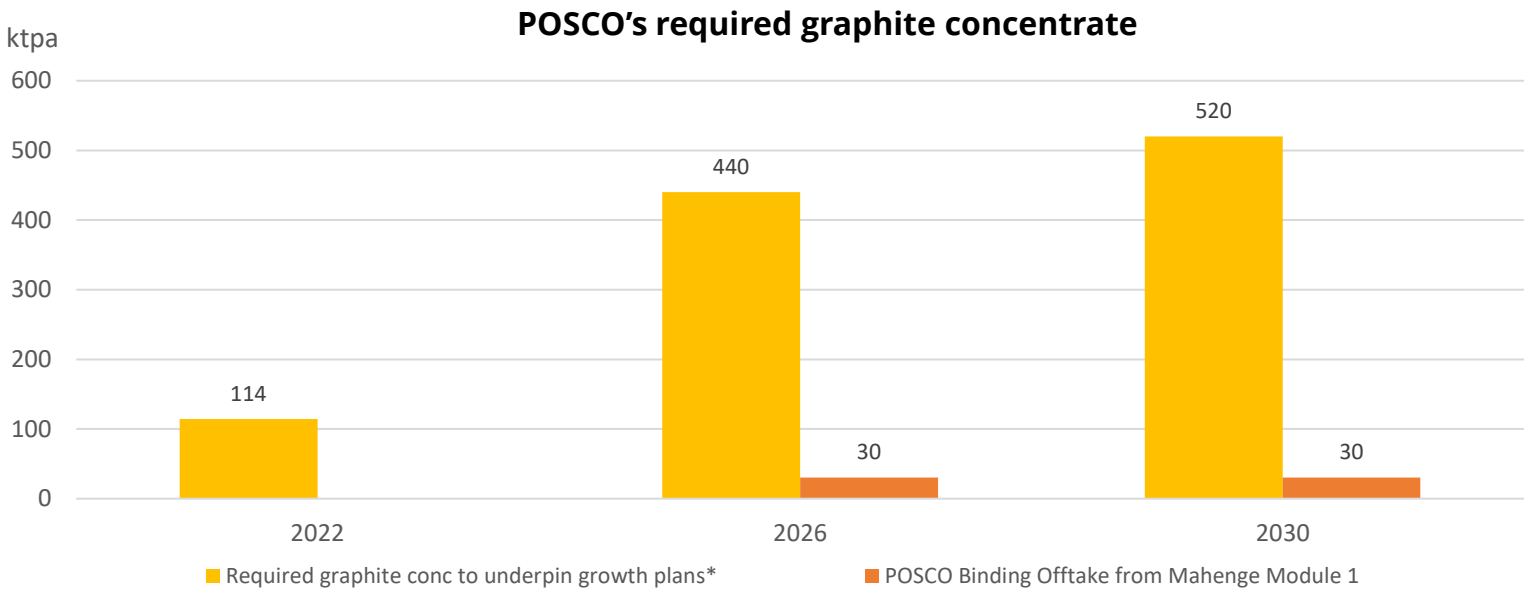
- In 2022, POSCO was the largest anode producer outside China
- POSCO plans to spend US$93bn on growth projects by 2030[1]
- 46% of POSCO's capex spend in 2023-2025 is on LiB Materials[2]



Source: POSCO Holdings Battery Materials Business Value Day Presentation, 11 July 2023, Slide 43.



*Based on the typical industry yield to SPG in China of 35%

[1]Source: https://www.reuters.com/markets/commodities/south-koreas-posco-plans-93-bln-investment-by-2030-2023-07-03 (3 July 2023)
[2]Source: POSCO Holdings Battery Materials Business Value Day Presentation, 11 July 2023, Slide 5. In 2023-2025, POSCO's LiB Materials Business has the largest share of group capital expenditure for the first time at 46.2% (Steel 38.9%, Eco-friendly infrastructure 14.9%)

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Strong near term news flow

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Black Rock is well advanced on several key de-risking milestones, expected near term

Black Rock sees a number of potential de-risking milestones due near term:

- Potential POSCO milestones:
  - Signing full-form offtake agreement ✓
  - Signing full-form prepay agreement for US$10m ✓
  - Potential for POSCO to take up it's right to a BKT board seat[1]
- Potential debt financing milestones:
  - Aiming for credit-approved Term Sheets by end Q3 CY23
  - Mandate debt lead arrangers
  - Announce offtake with more blue-chip customers
- Other potential financing milestones:
  - Confirm POSCO agreement to sell LOM rights to fines for Module 2[2]
  - Bring in a partner at the project level as a less dilutive option[3]
  - Also assessing other options focused on minimising dilution / maximising value per share

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[1]POSCO has a right to appoint a BKT director if it maintains an equity stake in Black Rock of >10% (currently 11.5%).
[2]Non-binding MOU signed with POSCO in Sept 2023 for the LOM rights to the fines for Module 2 for an investment in BKT of up to US$40m or 19.9% (whichever is lower).
[3]Interest received from industry participants, OEMs, mining companies, mining private equity funds and sovereign wealth funds. Macquarie mandated to run process.

BKT ready to deliver

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The significant Tier 1 scale Mahenge graphite mine into an undersupplied and growing market

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Strategic Alliance with POSCO

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Black Rock has a strong and growing relationship with POSCO

- POSCO is Black Rock's major shareholder with a stake of 11.5%
- POSCO is Black Rock's cornerstone offtake partner:
  - Module 1:
    - Binding life-of-mine offtake agreement for fines[1] (32% of volume)
    - MOU for 6ktpa of large flake[2] (7% of volume)
  - Module 2:
    - MOU for fines offtake[3]
- POSCO is providing development finance for Module 1:
  - Binding US$10m prepayment[1]
  - MOU for US$40m investment in BKT or 19.99% (whichever is lower)[3]
- Exploring other opportunities to collaborate:
  - MOU to explore other opportunities to develop an IRA-compliant anode supply chain[3]

[1]Source: https://blackrockmining.com.au/wp-content/uploads/BindingOfftakeAndUS10MPrepaymentAgreementsWithPOSCO29May23.pdf
[2]Source: https://blackrockmining.com.au/wp-content/uploads/BlackRockExpandsOfftakePartnershipWithPOSCO23May23.pdf
[3]Source: https://blackrockmining.com.au/wp-content/uploads/BlackRockSignsMOUWithPOSCOForMahengeModuleTwoOfftakeForBKTInvestmentOfUpToUSFortyMillionDollars04Sep23.pdf

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Tanzania: An improving jurisdiction for investment

- Moody's recently upgraded Tanzania to a B2 Positive due to reduced political risk and structural reform agenda[1]
- Equinor/Shell/Exxon Mobil recently struck a deal for the development of an LNG terminal in Tanzania expected to cost tens of billions of dollars[2]
- BHP has committed to investing US$100m in the Kabanga nickel project
- Since Tanzania launched the Development Vision in 2020 to attract investment, the mining sector's contribution to GDP has grown from 3.5% to 9.7%[3]
- Tanzania has now agreed 11 framework agreements with foreign mining companies and is negotiating an additional 5 agreements[4]

[1]Source: https://www.thecitizen.co.tz/tanzania/news/national/moody-s-gives-tanzania-favourable-credit-rating--4206196
[2]Source: https://www.reuters.com/business/energy/equinor-shell-exxon-agree-lng-project-with-tanzania-2023-05-19/
[3]Source: https://www.thecitizen.co.tz/tanzania/news/national/how-government-plans-to-boost-mining-s-gdp-contribution-to-10-percent-before-2025—4245214
[4]Source: https://dailynews.co.tz/why-mining-investment-forum-crucial-for-tz/

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Li-ion battery raw materials supply chain by country

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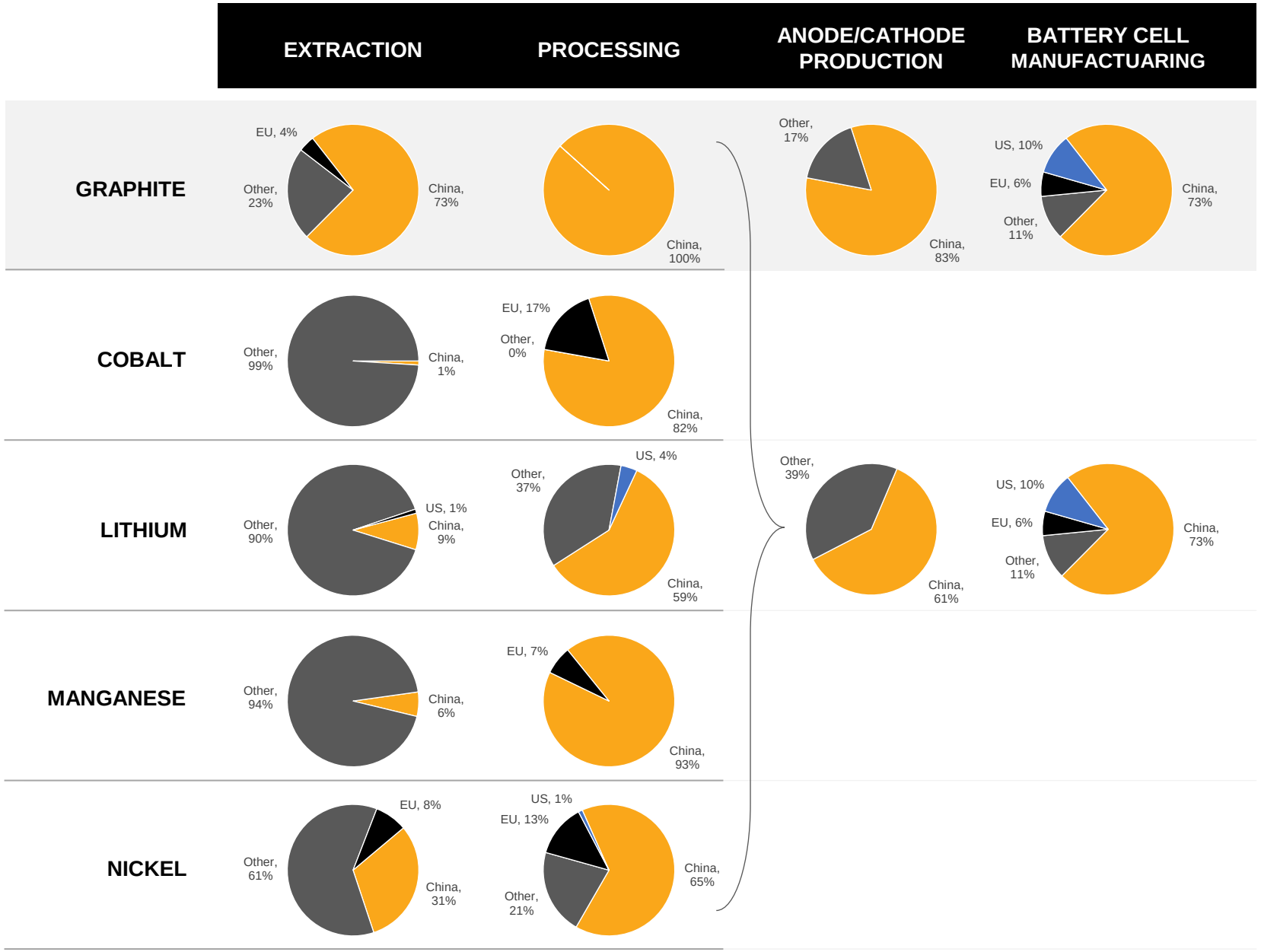
Graphite supply chain for batteries is more dependant on China than any other material



Sources: Public releases, Benchmark Mineral Intelligence, Black Rock Mining

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Natural graphite increasing in batteries

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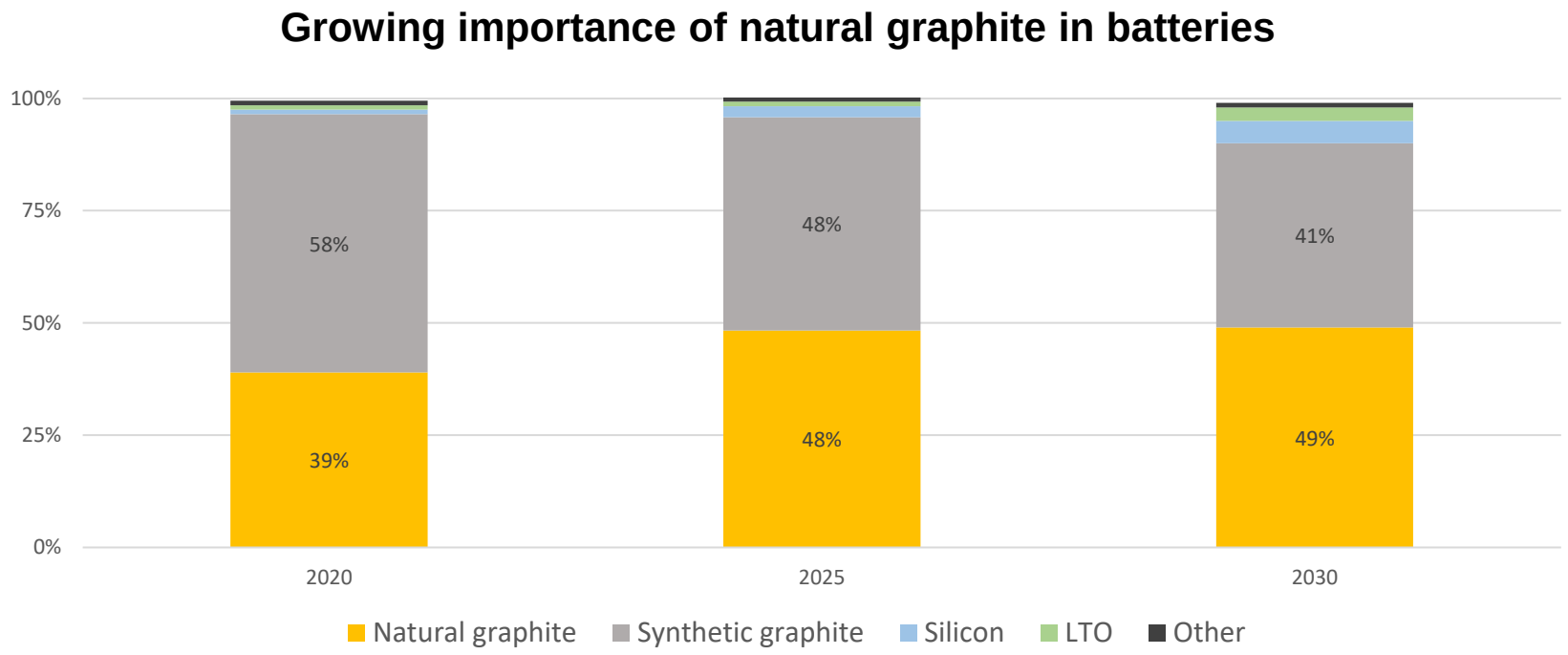
The use of natural graphite in batteries has been growing and is expected to surpass synthetic graphite in 2025.



Demand for LIBs	kt	kt	kt
Synthetic graphite:	179	625	1,438
Natural graphite	182	1,079	2,805

- Natural graphite is less energy intensive to produce, much less expensive and provides greater energy density than synthetic graphite
- Tesla/Panasonic already uses 50/50 natural graphite/synthetic graphite and the “in-development” 4680 battery is expected to comprise 55-60% natural graphite / 40-45% synthetic graphite

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Sources: Public releases, Benchmark Mineral Intelligence Q4 CY22, BMO, Tesla, Black Rock Mining

Strong outlook for natural graphite

Benchmark forecasting material natural graphite supply deficit in 2023

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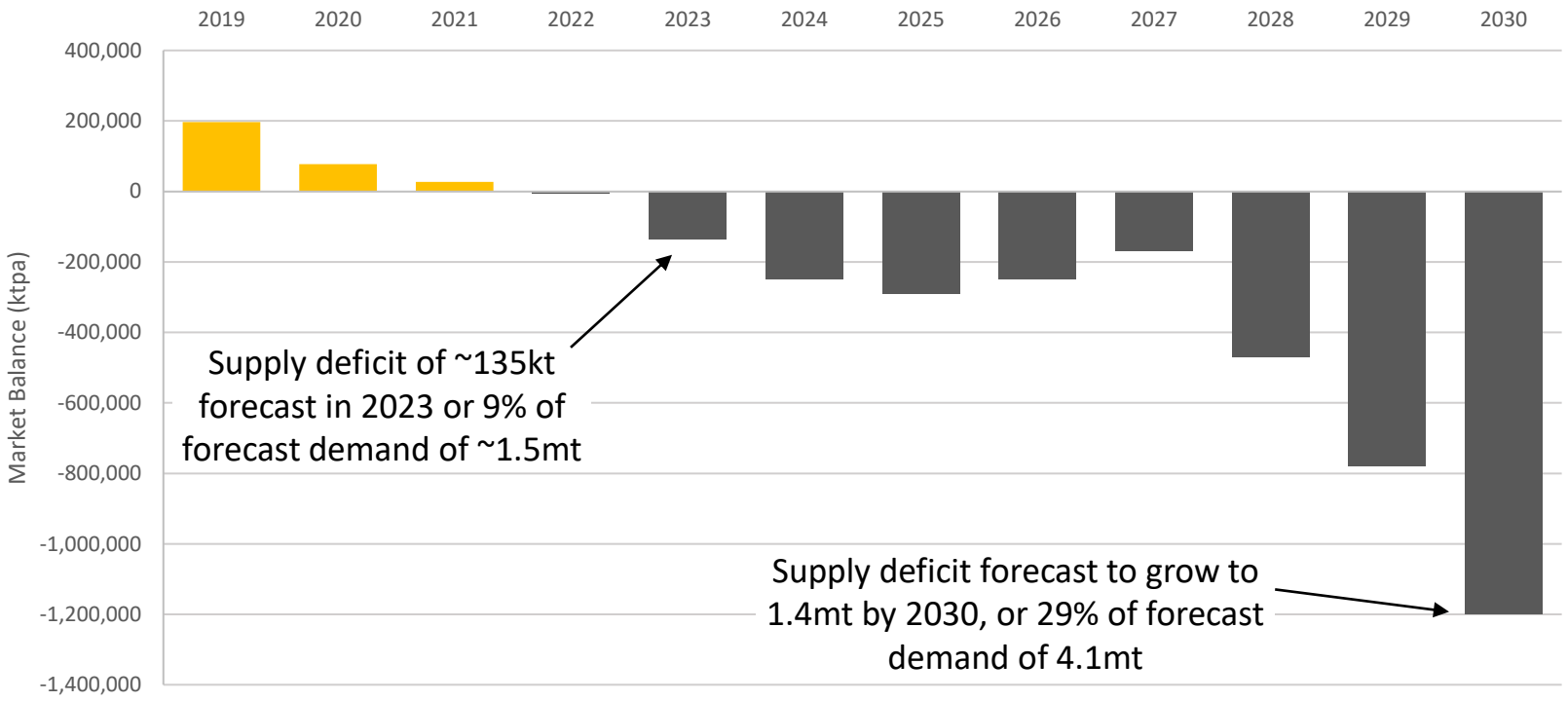
Material natural graphite supply deficits forecast from 2023



Strong demand driven by:

- Strong uptake of electric vehicles and for decarbonisation
- Natural graphite expected to exceed synthetic graphite in batteries by 2025 (vs. historic split of 60/40 SG/NG)
- Another strong demand segment is graphite foils (requires large flake graphite)

Constrained supply due to:

- Qualification requirement can add several years to development of mines
- Project debt tends to be more difficult for graphite developers due to inability to hedge graphite and dominance of China in downstream processing of graphite

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Sources: Public releases, Benchmark Mineral Intelligence Q4 CY22, Black Rock Mining

Strong outlook for natural graphite

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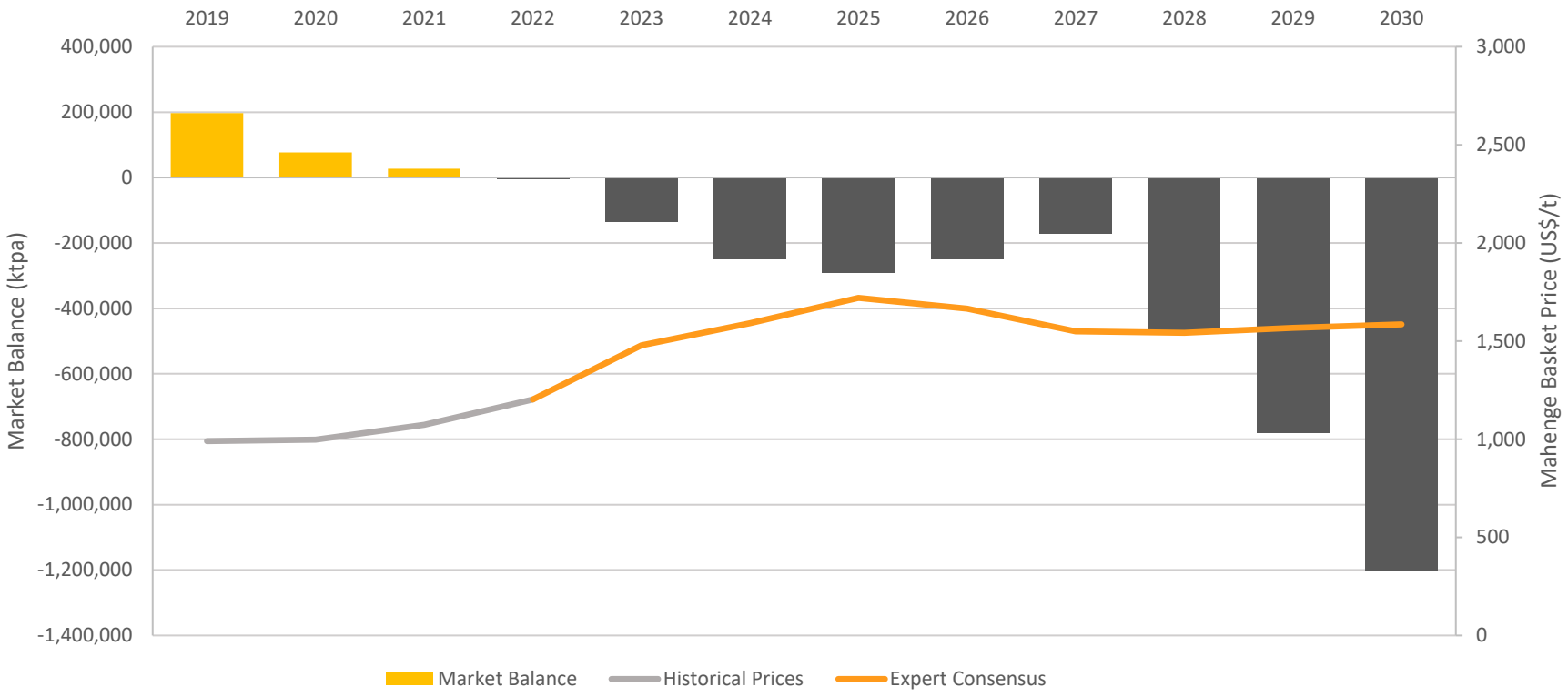
Expert Consensus pricing appears conservative given the magnitude of the forecast supply deficits

Material natural graphite supply deficits forecast from 2023



		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Expert Consensus - 97% conc grade	US$/t	1,203*	1,479	1,592	1,721	1,665	1,550	1,542	1,568	1,585	1,611	1,643	1,643
Year on year change	%		23%	8%	8%	-3%	-7%	-1%	2%	1%	2%	2%	0%

Sources: Public releases, Benchmark Mineral Intelligence, Black Rock Mining, Asian Metals, ICC Sino, RefWin

Note: Expert Consensus comprises average graphite forecast prices provided by Benchmark Mineral Intelligence, Fastmarkets and Wood Mackenzie. Historic prices for 97% conc have been estimated. *Estimate based on ~12month average prices to end Sept 2022

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Graphite uses

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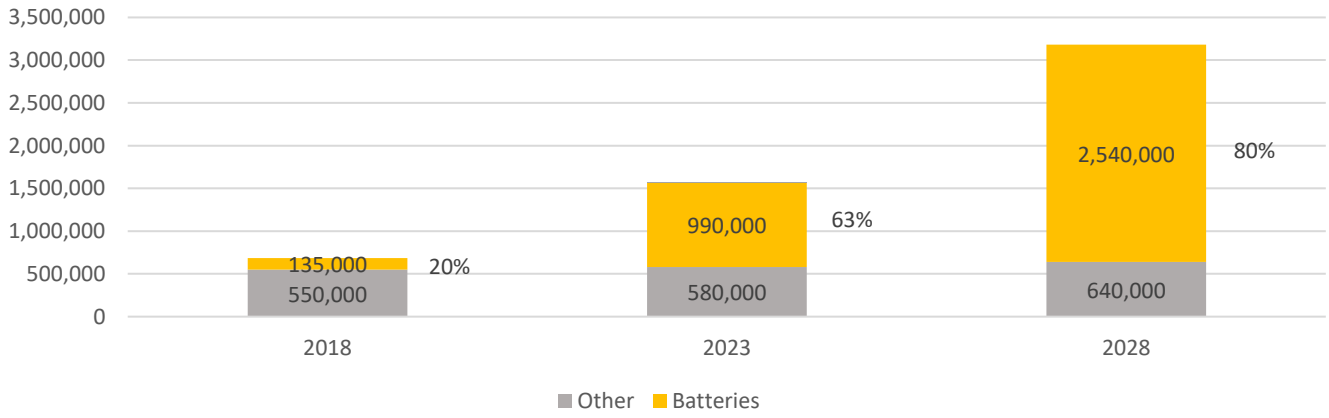
Black Rock has a diversified product mix with 60% exposure to the high margin large flake market

Price increases with flake size

SMALL FLAKE (FINES)	LARGE FLAKE	JUMBO FLAKE
Lithium-Ion Batteries	Flame Retardants	Flame Retardants
Paint & Coatings	Refractories	Gaskets & Seals
Lubricants	Aviation	Expandable Graphite
Pencils	Lithium-Ion Batteries	Fuel Cells

Natural graphite: Growing importance of battery demand



Source: Public releases, Benchmark Mineral Intelligence Q4 2022, Roskill, Black Rock Mining

Offtake agreements

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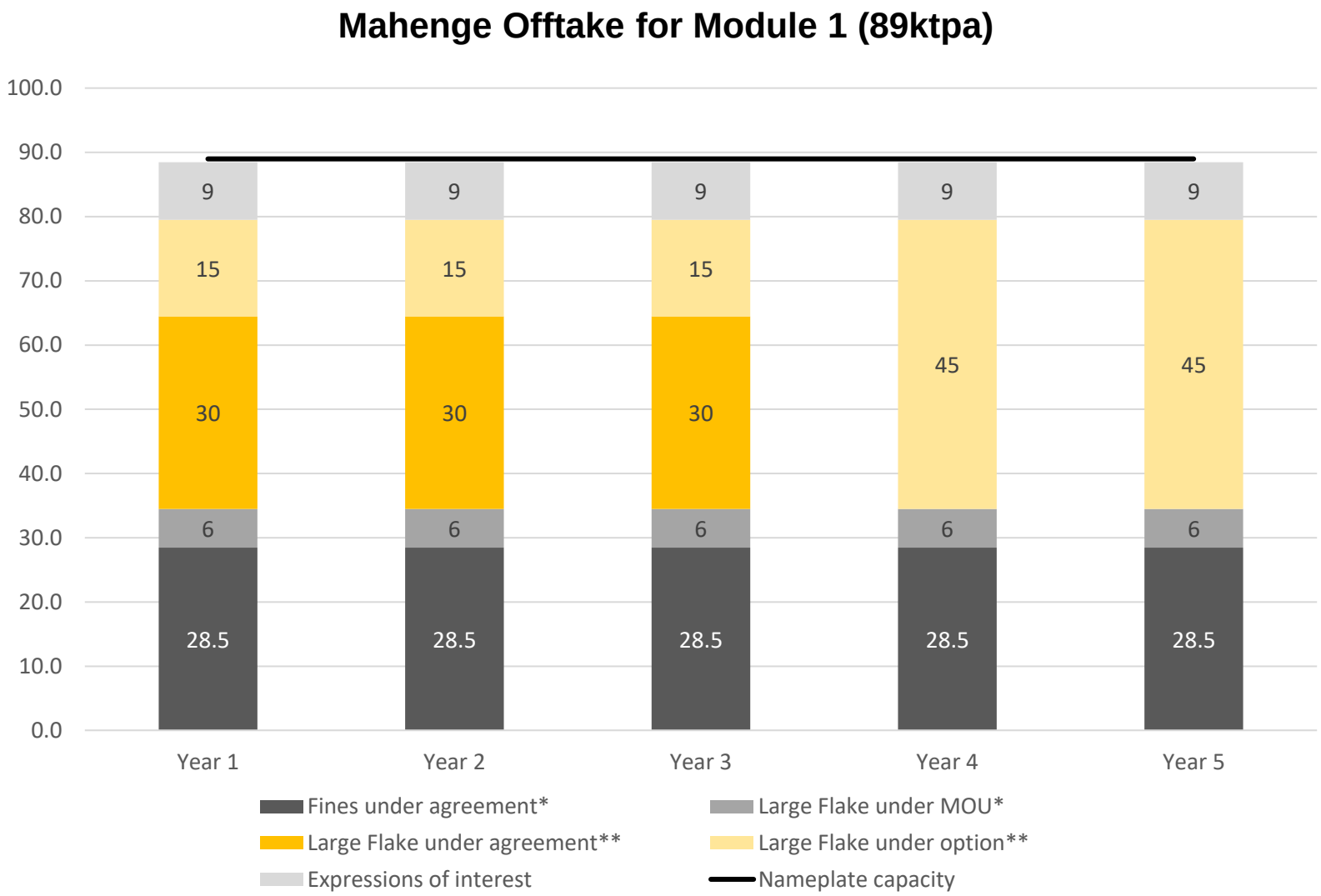
~89% of Mahenge's Module 1 production is under binding offtake, option or MOU



*With POSCO. ** With Muhui International Trade (formerly known as Taihe Soar) & New Materials

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