Rio Tinto

Notice to ASX

2023 Half Year Results Presentation

26 July 2023

The Rio Tinto 2023 half year results presentation will be given at 9.30am (BST) / 6.30pm (AEST) today by Rio Tinto Chief Executive Jakob Stausholm, and Chief Financial Officer Peter Cunningham. The presentation slides are attached and also available at https://www.riotinto.com/en/invest/financial-news-performance/results.

The live webcast will be available at https://www.riotinto.com/en/invest/financial-news-performance/results.

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This announcement is authorised for release to the market by Steve Allen, Rio Tinto's Group Company Secretary.

2023 Half Year Results

26 July 2023

Oyu Tolgoi, Mongolia

Cautionary and supporting statements

This presentation has been prepared by Rio Tinto plc and Rio Tinto Limited (together with their subsidiaries, "**Rio Tinto**"). By accessing/attending this presentation you acknowledge that you have read and understood the following statements.

Production Targets

The 500kpta copper and 350kozpa gold target (stated as recoverable metal) for the Oyu Tolgoi underground and open pit mines for the years 2028 to 2036 referenced in slides 14 and 21 is underpinned 13% by Proved Ore Reserves and 87% by Probable Ore Reserves. This production target has been scheduled from mine designs based on the Oyu Tolgoi Feasibility Study 2020 (OTFS20), which are not materially different to current mine designs, by Competent Persons in accordance with the requirements of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, 2012 Edition (the JORC code).

The production profiles for the Oyu Tolgoi underground and open pit mines shown in slide 43 are underpinned 41% by Proved Ore Reserves and 59% by Probable Ore Reserves for 2023 to 2027, and 10% by Proved Ore Reserves and 90% by Probable Ore Reserves for 2028 to 2036. The life of mine production profile shown in slide 43 is underpinned 22% by Proved Ore Reserves and 78% by Probable Ore Reserves for 2023 to 2051. The financial forecasts shown in slide 44 are based on production targets which are underpinned 43% by Proved Ore Reserves and 57% by Probable Ore Reserves for 2023 to 2025, 26% by Proved Ore Reserves and 74% by Probable Ore Reserves for 2026 to 2029, and 9% by Proved Ore Reserves and 91% by Probable Ore Reserves for 2030 to 2033. These production targets are stated as recovered metal and have been scheduled from current mine designs for the Oyu Tolgoi underground and open pit mines by Competent Persons in accordance with the requirements of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, 2012 Edition (The JORC code).

Forward-looking statements

This presentation includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this report, including, without limitation, those regarding Rio Tinto's financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to Rio Tinto's products, production forecasts and reserve and resource positions), are forward-looking statements. The words "intend", "aim", "project", "anticipate", "estimate", "plan", "believes", "expects", "may", "should", "will", "target", "set to" or similar expressions, commonly identify such forward-looking statements.

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Jakob Stausholm

Chief Executive

RioTinto

Oyu Tolgoi, Mongolia

Strong financials and consistent progress

Production (CuEq)[1]	**↑ 5%** **2,317kt in H1 2023**	**Underlying ROCE**	**20%**
Underlying EBITDA	**$11.7 bn** **Underlying EBITDA margin at 42%**	**Underlying earnings**	**$5.7 bn**
Free cash flow	**$3.8 bn**	**Dividends**	**177 US cps** **Equal to $2.9 bn**

[1]Based on long-term consensus pricing

Investing in the health of our business…

Safety remains our top priority	Improving asset health	Building a thriving culture	Strengthening our social licence

…while shaping our portfolio for the future


Oyu Tolgoi underground


Kennecott underground


La Granja


AP60


Matalco joint venture


Simandou


Western Range


BlueSmelting™

Peter Cunningham

Chief Financial Officer

Beijing, China

Robust results

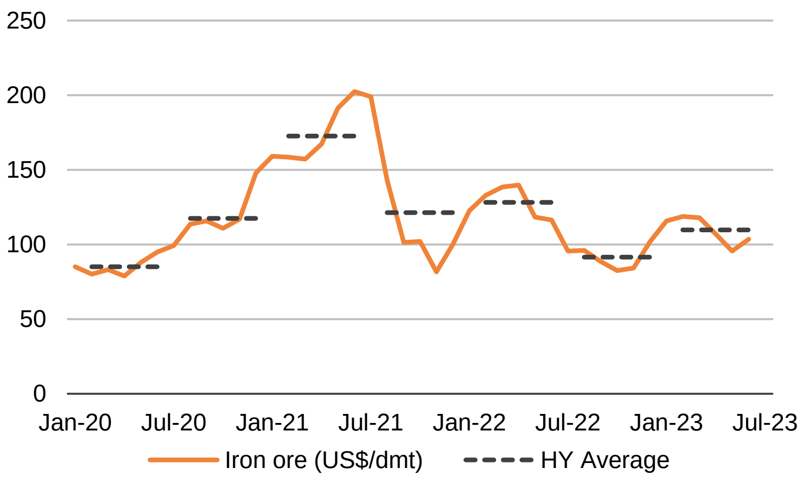
$bn, except where stated	H1 2023	H1 2022	Comparison
Production (CuEq kt)[1]	**2,317**	2,200	**+5%**
Consolidated sales revenue	**26.7**	29.8	**-10%**
Underlying EBITDA	**11.7**	15.6	**-25%**
Underlying earnings[2]	**5.7**	8.7	**-34%**
Net earnings[2]	**5.1**	8.9	**-43%**
Underlying ROCE[2]	**20%**	34%	**-12 pp**
Cash flow from operations	**7.0**	10.5	**-33%**
Capital expenditure	**3.0**	3.1	**-3%**
Free cash flow	**3.8**	7.1	**-47%**
Total dividend declared	**2.9**	4.3	**-34%**
Total dividend per share ($)	**1.77**	2.67	**-34%**
Net debt	**4.4**	4.2*	**+5%**

[1]Based on long-term consensus pricing | [2]Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12, refer to page 41 of 2023 Interim Results Release for further detail. Reported numbers in 2022 were $8.6bn Underlying earnings, $8.9bn net earnings and 34% Underlying ROCE
*As at 31 December 2022

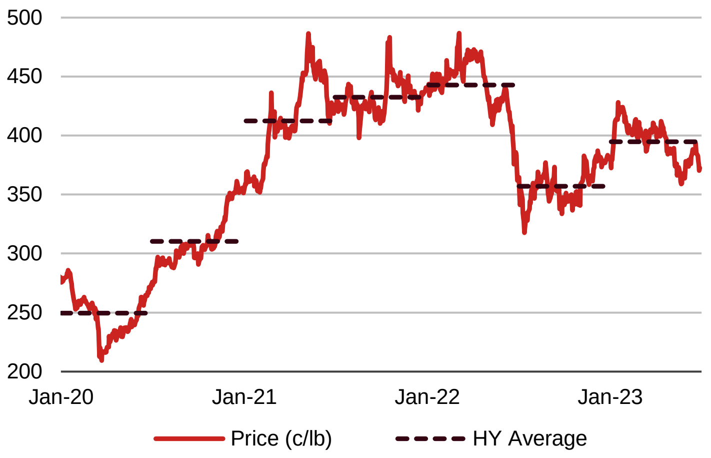
Iron Ore Company of Canada

Commodity prices recovering from low point in H2 but still down materially year on year

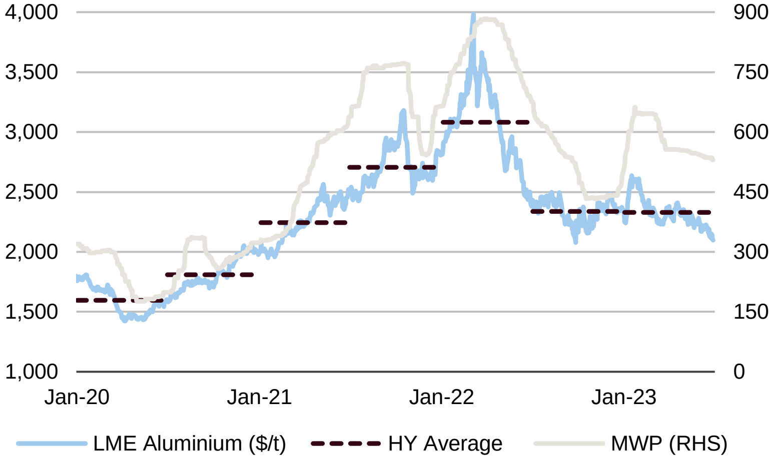
Iron Ore[1] index (-14% vs H1 ‘22)



Copper[2] LME (-10% vs H1 ‘22)



Aluminium[3] LME (-24% vs H1 ‘22)



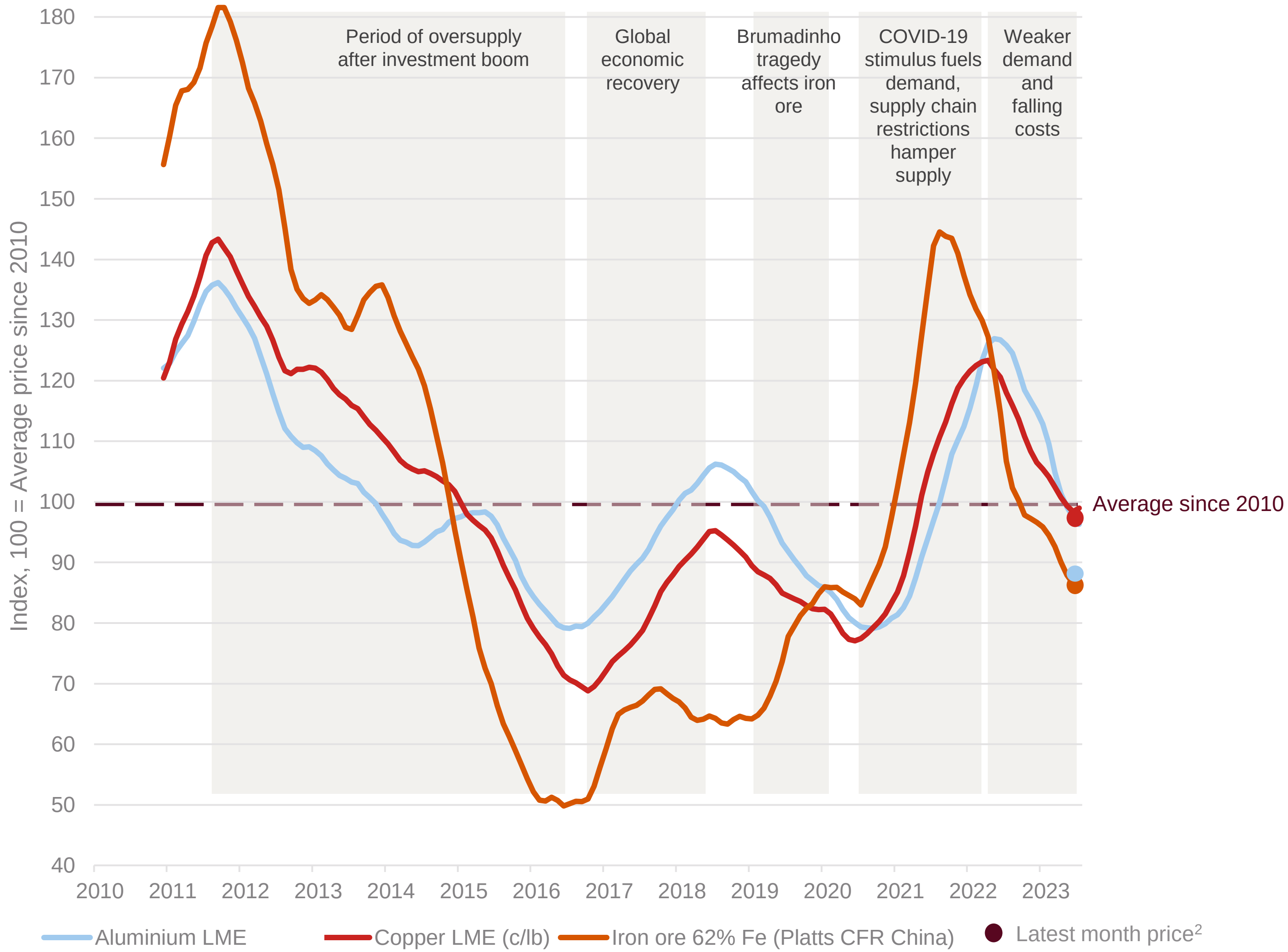
Realised pricing	H1 ‘22	H2 ’22	H1 ‘23	Delta (vs H1 ‘22)
Iron ore ($/dmt)	121	94	107	-11%
Copper (c/lb)	447	362	396	-11%

Realised pricing	H1 ‘22	H2 ’22	H1 ‘23	Delta (vs H1 ‘22)
Aluminium ($/t)[4]	3,808	2,870	2,866	-25%
Aluminium raw materials $/t index price				
Coal tar pitch	1,103	1,476	1,399	+27%
Petroleum coke	695	719	636	-8%

[1]Monthly average of Platts CFR index for 62% iron fines converted to FOB basis | [2]Average LME price | [3]Average LME price. MWP = US Midwest premium | [4]LME plus all-in premiums (product and market) | YoY = change in average price during first half compared to previous half year. Source: Rio Tinto Market Analysis, LME, S&P Global, CRU NA

Our major commodities: trading below their real-term 2010 average

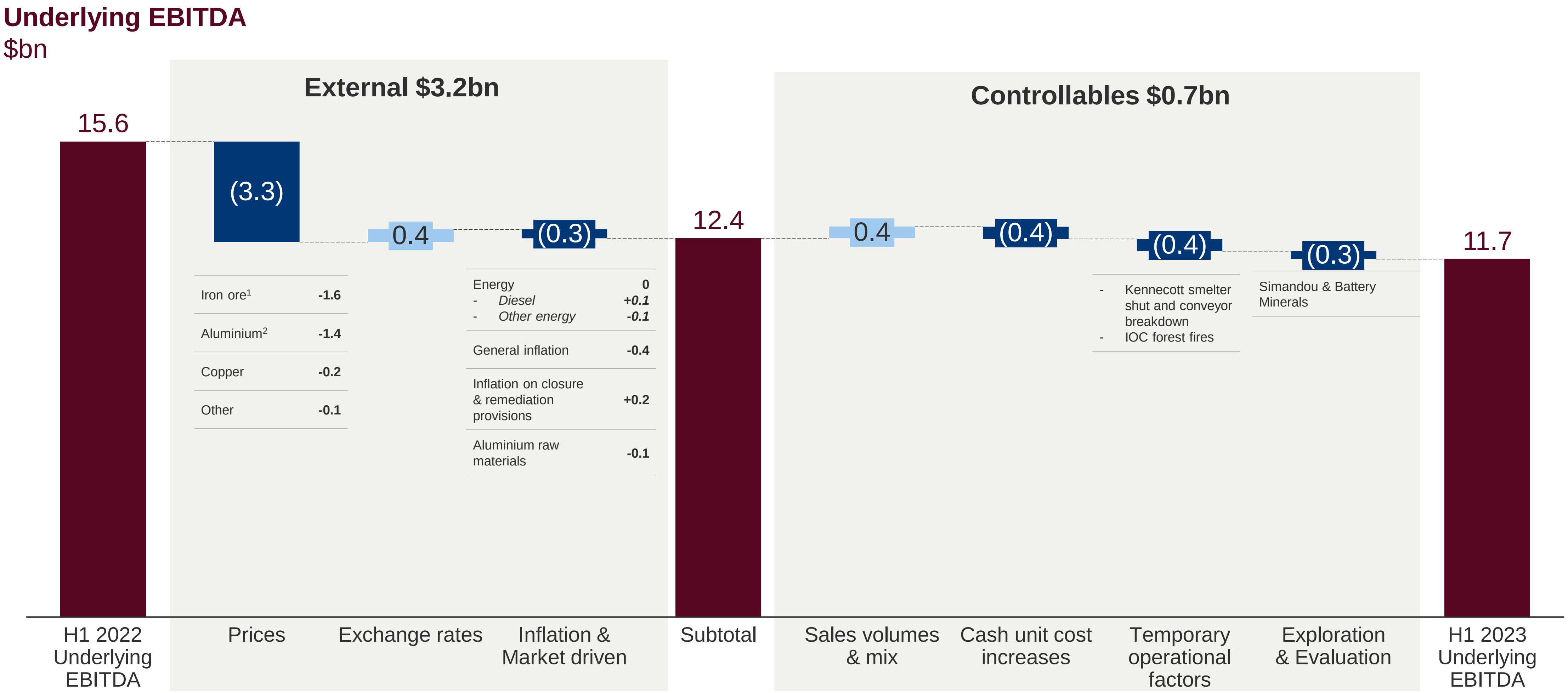
Commodity prices (real $2023, 12 months moving average)[1]



- Commodity prices falling for over a year as commodity intensive GDP growth and supply bottlenecks fade
- Currently trading below long-term levels in real terms
- Spot prices mostly trading above the lows of the second half of 2022, with falling input costs impacting aluminium

[1]Based on monthly average nominal prices, converted to real 2023 levels from January 2010 and provided as a 12 month moving average | [2]Based on average monthly price to 24 July 2023

Pricing remains the biggest driver – rate of cost inflation slowing but still a headwind



[1]Iron ore includes Pilbara, portside trading and IOC | [2]Aluminium includes alumina and bauxite
Note: Financial figures are rounded to the nearest million, hence small differences may result in the totals

Cash conversion impacted by working capital movements

$bn, except where stated	H1 2023	H1 2022	Comparison
Underlying EBITDA	**11.7**	15.6	**-25%**
Tax paid	**(2.4)**	(3.8)	**-37%**
Working capital outflow	**(0.9)**	(0.4)	**+125%**
EAUs[1] (EBITDA net of dividends)	**(0.8)**	(0.4)	**+100%**
Other	**(0.6)**	(0.5)	**+20%**
Net cash generated from operating activities	**7.0**	10.4	**-33%**
Capital expenditure (net)	**(3.0)**	(3.1)	**-3%**
Lease principal payments	**(0.2)**	(0.2)	**-%**
Free Cash Flow	**3.8**	7.1	**-46%**
Cash conversion[2]	**60%**	67%	**-7 pp**

Working capital outflow of $0.9bn in H1 2023 reflected:

- Build in blasted and mine stocks in the Pilbara to support system health
- Seasonally higher spares and stores
- Lower payables due to timing of spend and normal volatility in amounts due to JV partners and employees

Lower dividends from Escondida

[1]EAU = Equity Accounted Unit | [2]Cash conversion is Net cash generated from operating activities divided by underlying EBITDA

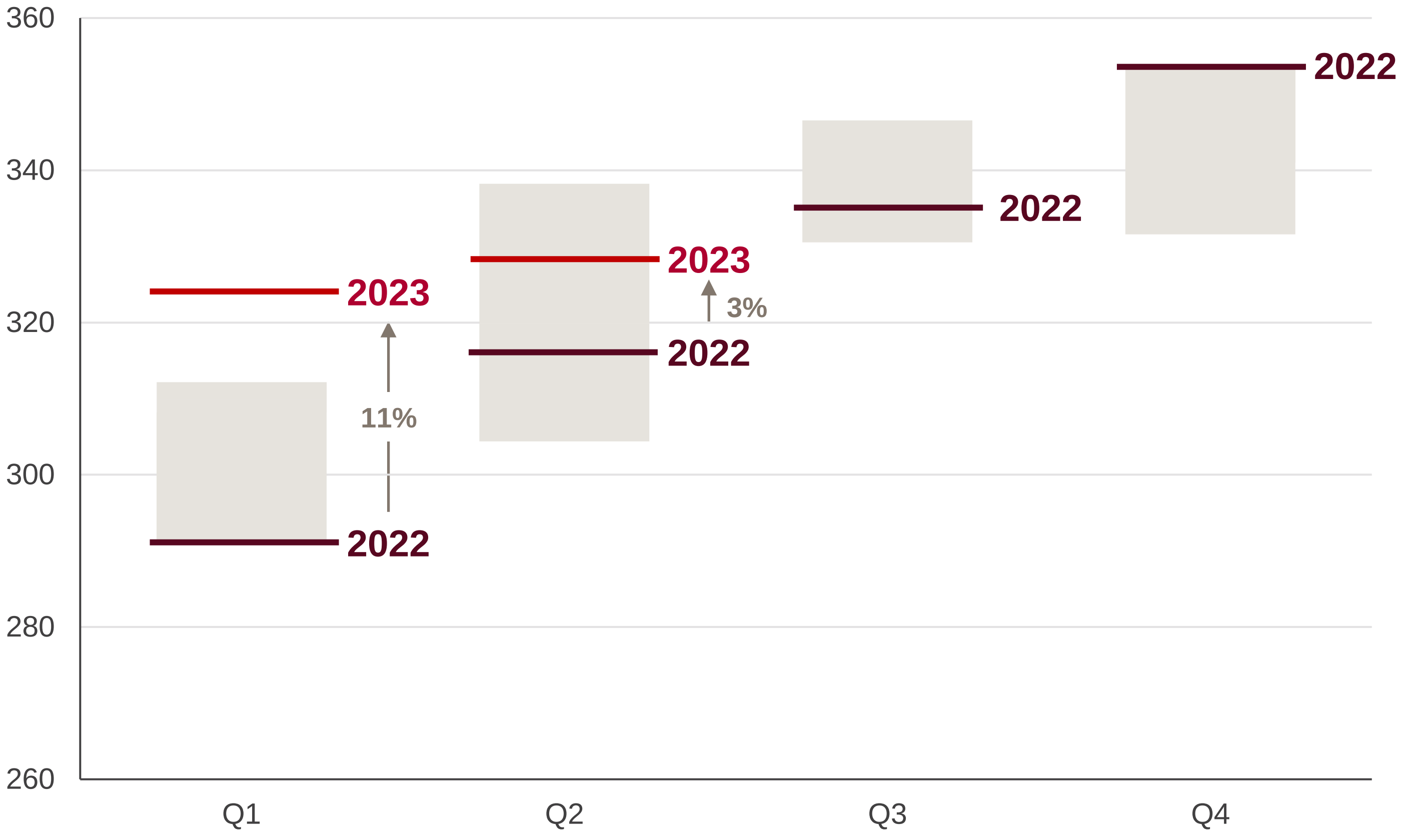
Pilbara Iron Ore, Canadian smelters and Oyu Tolgoi driving our momentum

$bn, except where stated	Iron Ore Sustained operational improvement	vs H1 22	Aluminium Kitimat ramping up	vs H1 22	Copper Unlocking growth	vs H1 22	Minerals Challenging market conditions	vs H1 22
Production	160.5mt[1]	+7%	1.6mt[2]	+9%	0.3mt[3]	-1%	0.6mt[4]	+4%
Underlying EBITDA	9.8	-6%	1.1	-60%	1.1	-29%	0.7	-45%
EBITDA margin[5,6]	69%	-1 pp	21%	-20 pp	43%	-11 pp	30%	-10 pp
Capex	1.1	-26%	0.6	-4%	0.9	+26%	0.3	+13%
Free cash flow	5.6	-20%	0.2	-89%	(0.5)	-45%	(0.2)	-165%
ROCE[6]	63%	-9 pp	4%	-16 pp	4%	-6 pp	13%	-8 pp
Performance	• Five quarters of improved operational performance • Gudai-Darri at full capacity • Shipments guidance now at upper half of range • With rising second half volumes, SP10 expected to be a larger proportion of shipments (10% in first half) • Construction of Western Range in line with schedule		• Metal volumes +9% versus first half 2022 as Kitimat ramps up to full capacity by year end • Price declines drive margins down, lower raw material costs to flow through in second half • Upgrading quality of highly competitive Canadian smelters with AP60 expansion, Alma VAP, Arvida recycling capacity and formation of Matalco recycling joint venture		• Margins remain robust despite 10% decline in LME copper • Achieved sustainable production from Oyu Tolgoi underground • Investing in Kennecott's future with smelter rebuild and underground • Geotechnical challenges and unplanned concentrator maintenance at Escondida		• IOC: forest fires impact production, lower prices • Weaker market conditions for Iron & Titanium and Boron businesses • Higher spending on Rincon 3000 starter plant with valuable insights gained and carried over to design and engineering of full-scale project	

[1]Pilbara production on a 100% basis | [2]Rio Tinto share | [3]Mined copper on a consolidated basis | [4]TiO_2 production, Rio Tinto share | [5]Pilbara underlying free on board (FOB) EBITDA margin is defined as Pilbara underlying EBITDA divided by Pilbara segmental revenue, excluding freight revenue. Aluminium is defined as integrated operations EBITDA margin | [6]Copper and Minerals defined as product group operations

Continued momentum in our Pilbara Iron Ore business

Mine production ranges by quarter[1]
(2019 to 2022, Mtpa)



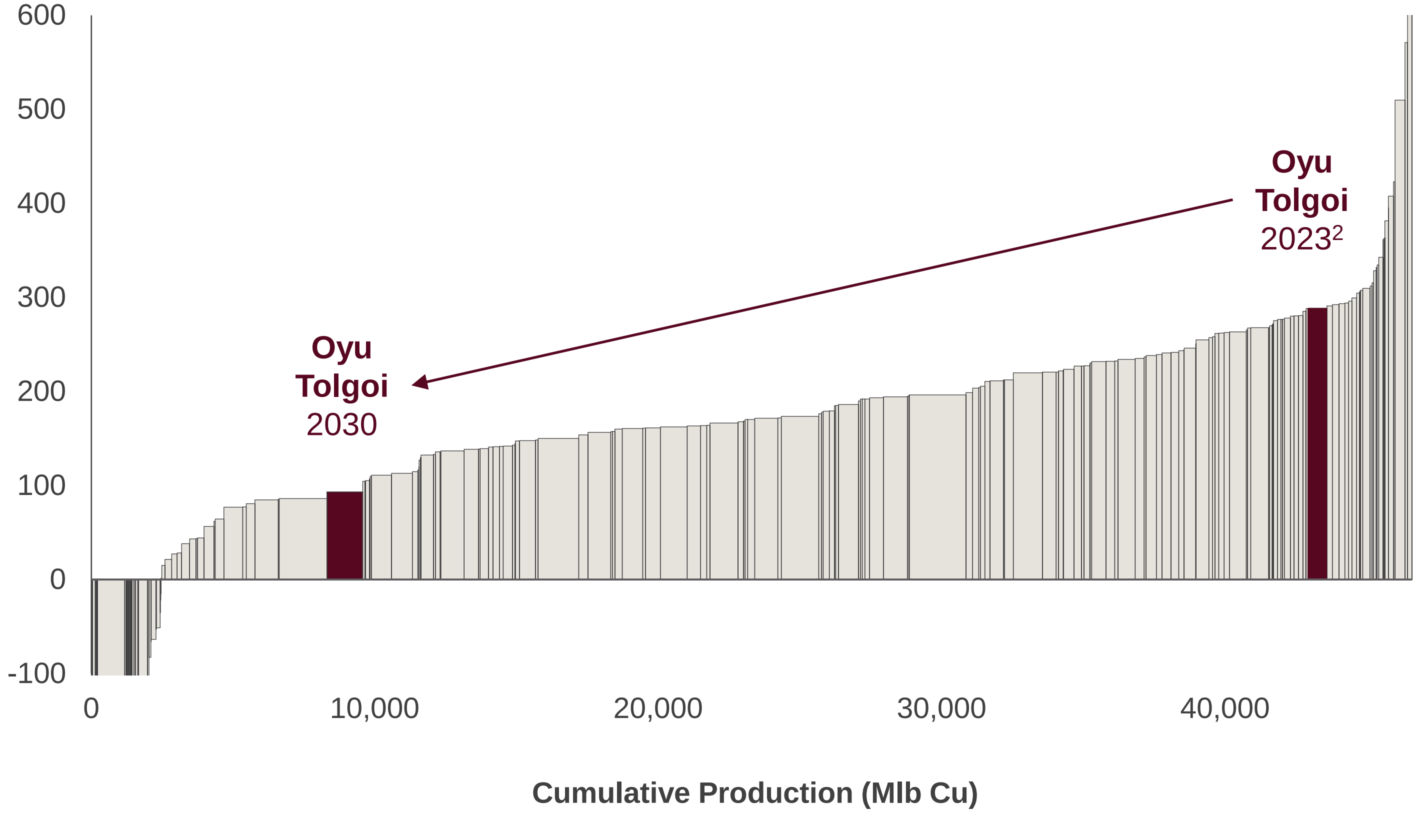
- 2023 shipments guidance at upper half of 320 to 335Mt range
- Ongoing operational improvements, and uplift from the Safe Production System
- SP10 was 10% of total shipments[2] in H1: expected to be a higher share in H2
- H1 unit costs $21.2 per tonne, down 6% YoY
- Management of environmental footprint, cultural heritage and engagement with Traditional Owners integral to the way we work
- Progressing approvals for next tranche of replacement mines, with Rhodes Ridge order of magnitude study expected in 2023
- Continued focus on asset reliability and pit health

[1]Minimum and maximum range is based on annualised quarterly figures for the period 2019-2022
[2]100% basis

Oyu Tolgoi expected to yield significant free cash flow in 2nd half of decade

2030 Copper Equivalent Cost Curve[1]

Copper equivalent unit cost including sustaining capex (c/lb)



- Oyu Tolgoi's operating assets of $14.3 billion represented ~25% of the Group total at 30 June 2023
- Sustainable underground production achieved in March 2023
- More than 80% of growth capital already spent
- Expected to ramp up to 500kt per annum average copper production from 2028-36[3]
- Set to become the world's 4th largest copper mine by 2030[4]

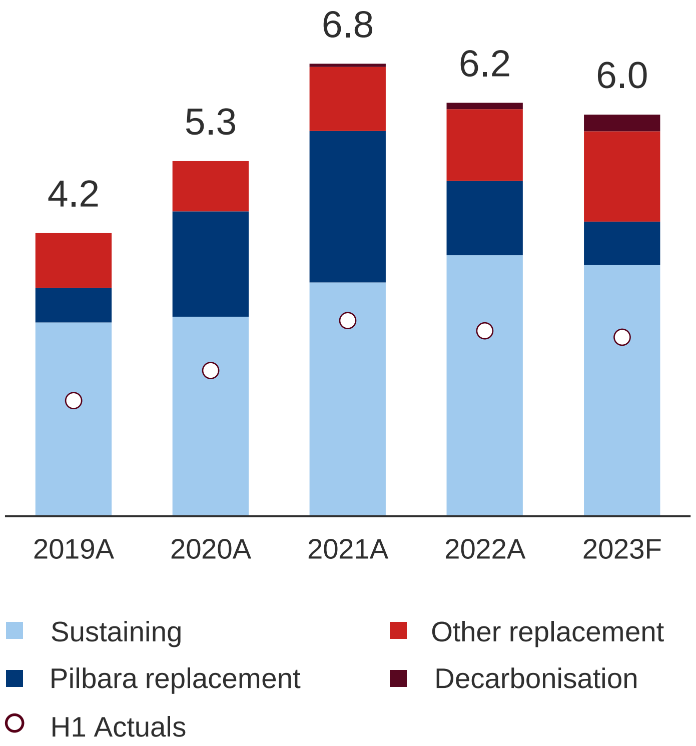
RioTinto

[1]Source: Wood Mackenzie Ltd. Dataset 2023 Q1, Rio Tinto | [2]Oyu Tolgoi cost quartile position on 2023 Copper Equivalent Cost Curve | [3]See supporting references for the 500kpta copper target on slide 2 | [4]Source: Wood Mackenzie Ltd. Dataset Dec 2022, based on production from committed projects

We will continue to invest consistently through the cycle

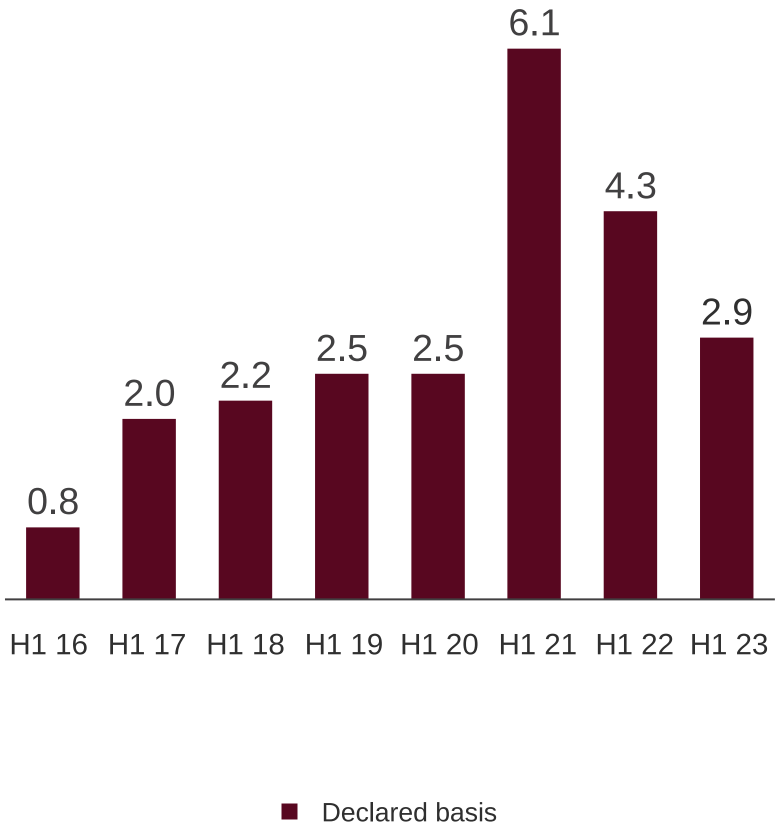
01 Essential capex

Integrity, Replacement, Decarbonisation

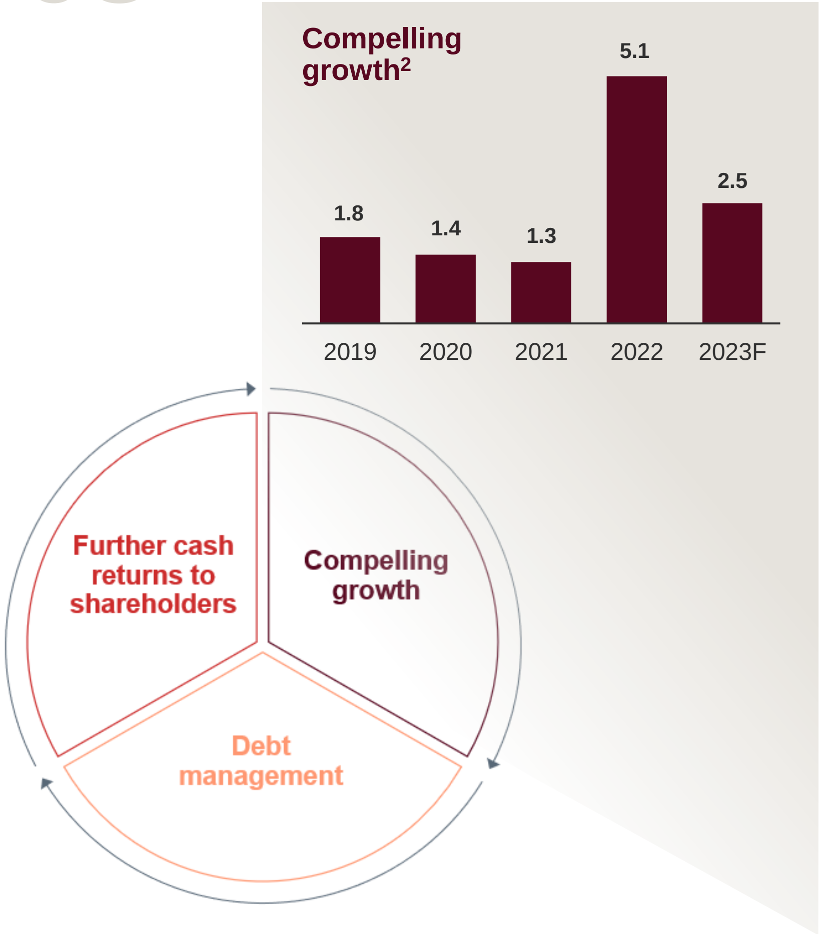


02 Interim ordinary dividends

40-60% of underlying earnings on average through the cycle[1]



03 Iterative cycle of…

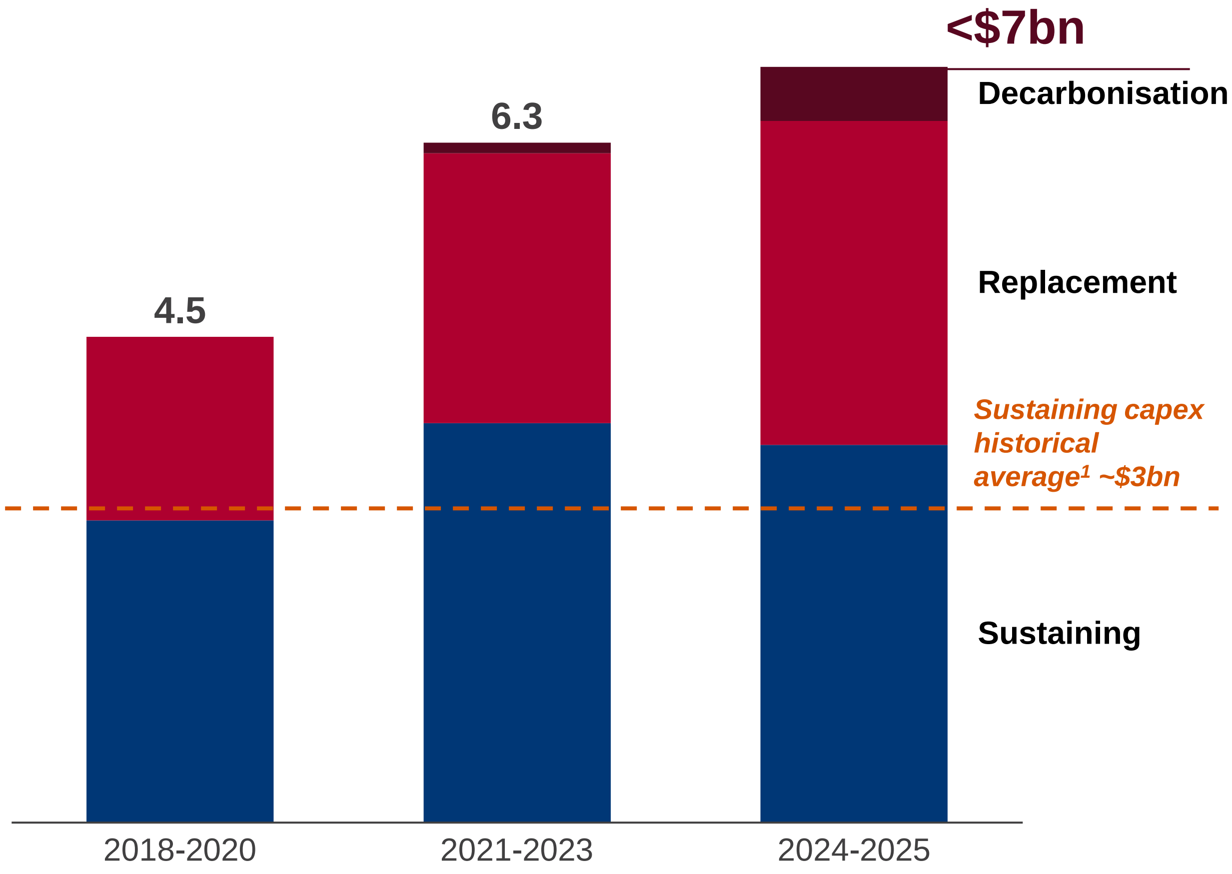


[1]Shareholder returns on a declared basis, excluding divestment proceeds returned to shareholders | [2]Includes acquisitions of Turquoise Hill Resources and Rincon Lithium, growth capex, and Exploration and Evaluation spend on a Rio Tinto share basis

Disciplined investing for asset health, growth and decarbonisation

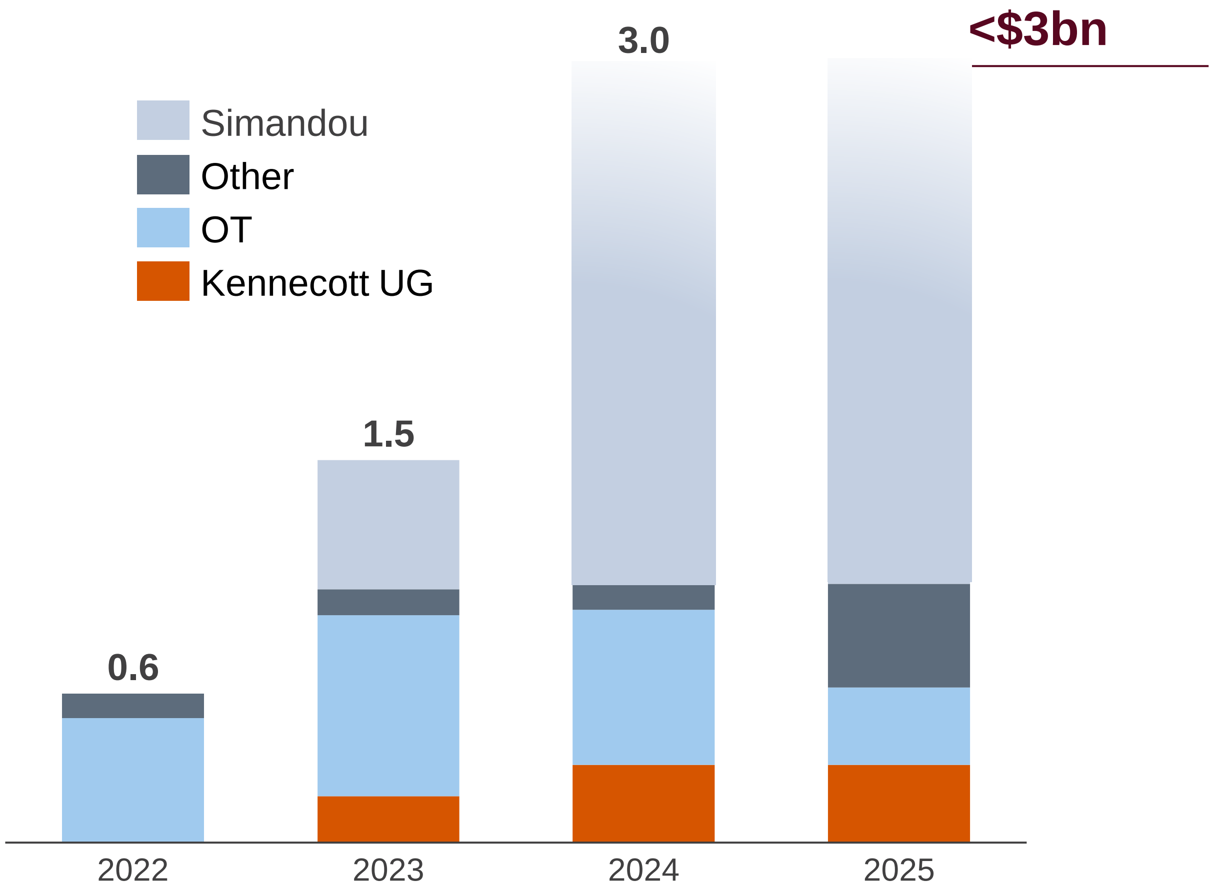
Essential capex (US$bn, annual average)

Investing in the health of our existing business



Growth capex[2] (US$bn)

Shaping our portfolio for the future

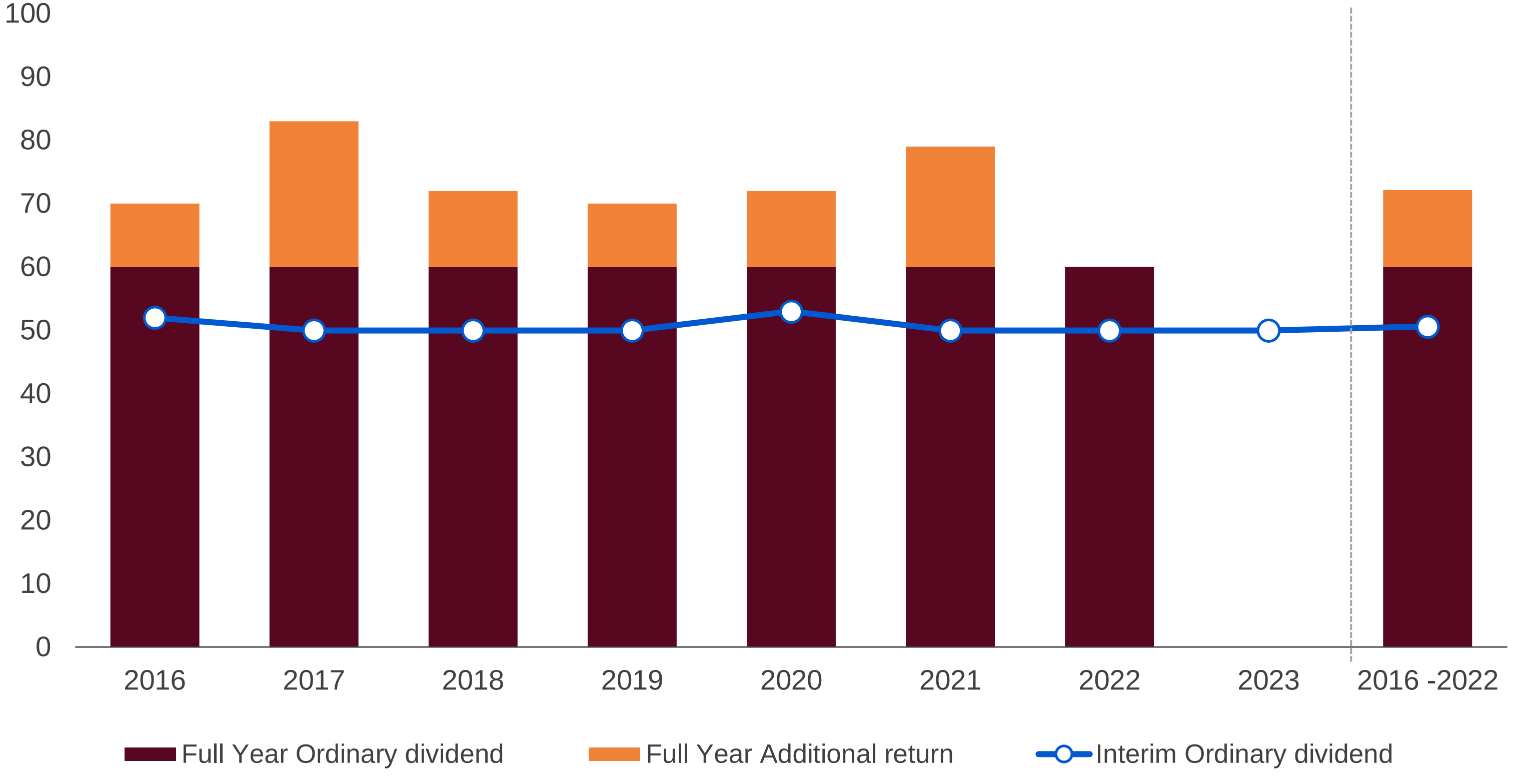


[1]2012 – 2017 period | [2]On a Rio Tinto share basis

Attractive dividends remain paramount

Shareholder returns[1] of 40-60% of underlying earnings on average through the cycle

Payout ratio (%)



- **$2.9bn of dividends declared for H1**
- **50% payout,** in line with our policy and with the intention that the balance between interim and final dividend be weighted to the final
- **Consistent seven-year track record** of shareholder returns
  - 50% average payout on interim ordinary dividend over the past eight years

[1]On a declared basis, excluding divestment proceeds returned to shareholders

Jakob Stausholm

Chief Executive

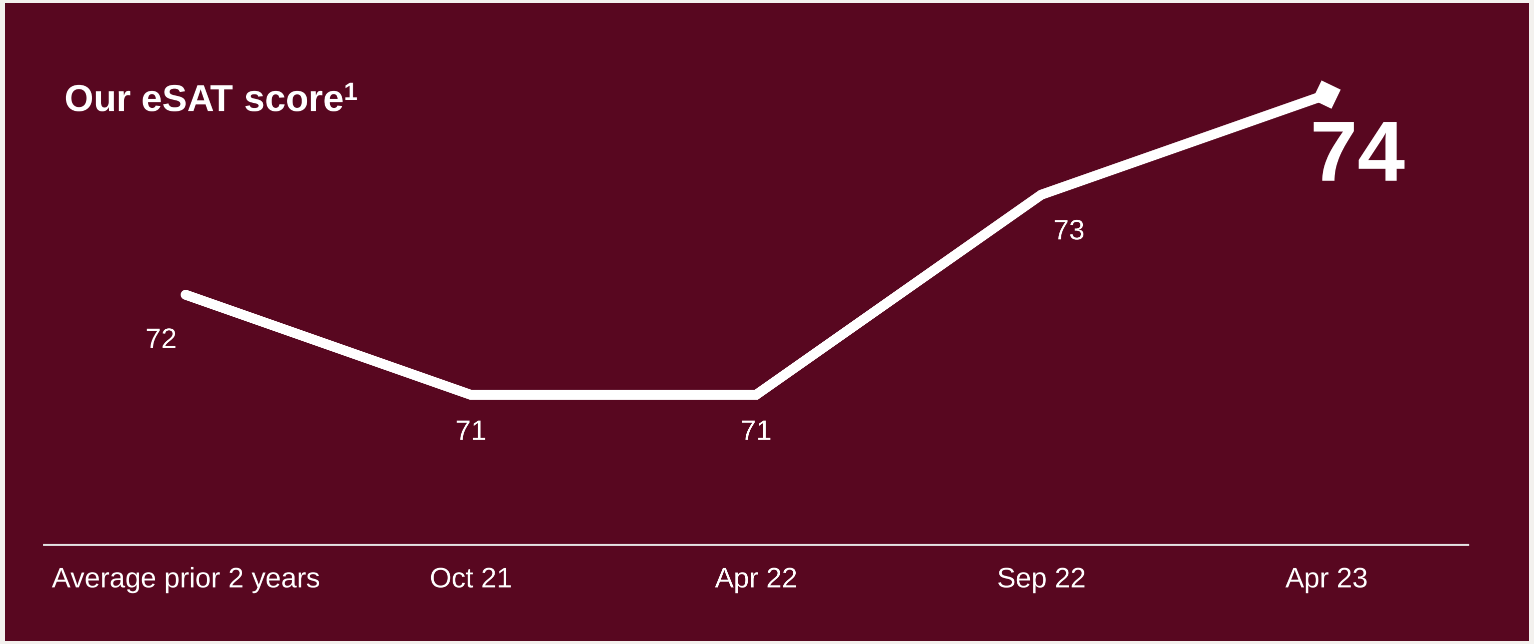
Oyu Tolgoi, Mongolia

Gathering momentum with a clear pathway

Finding better ways to provide the materials the world needs

Care | Courage | Curiosity

Executing our strategy



- **Pilbara**
  7% production uplift YoY
- Much to do elsewhere to achieve operating excellence
- **Safe Production System** deployment on schedule
- Building a values-based performance culture with care, courage and curiosity as the foundations
- Improving our employee engagement in particular at sites where SPS is deployed

[1] eSAT (employee satisfaction) is a measure of how happy employees are to work at Rio Tinto (average score)

Our four objectives in action
Oyu Tolgoi – a world leading copper business

Entering an exciting phase as the underground ramps up

Best in class water consumption rates with continuous improvement

AIFR = 0.20[1]
One of the safest operations in Rio Tinto and the mining industry

Ramp-up on track to deliver 500kt per annum from 2028 – 2036[2]

Strong pipeline of options to sustain and grow

Partnering for prosperity

[1]May 2023 year to date | [2]See supporting references for the 500kpta copper target on slide 2

Finding better ways to provide the materials the world needs

Growing our North American aluminium business

[1] AP60 technology generates approximately 1.6 tonnes of CO_2e per tonne of aluminium produced, compared to approximately 3.2 tonnes of CO_2e per tonne of aluminium for the Arvida smelter's current technology, and over 12 tonnes of CO_2e per tonne of aluminium for the industry average

Global decarbonisation portfolio accelerating – near-term delivery remains a challenge

BlueSmelting™ at RTIT

- **Ilmenite reduction technology**
- **95% less GHG emissions** potential from BlueSmelting™
- **First production delivered** in July 2023 from demonstration plant

Boron biofuel

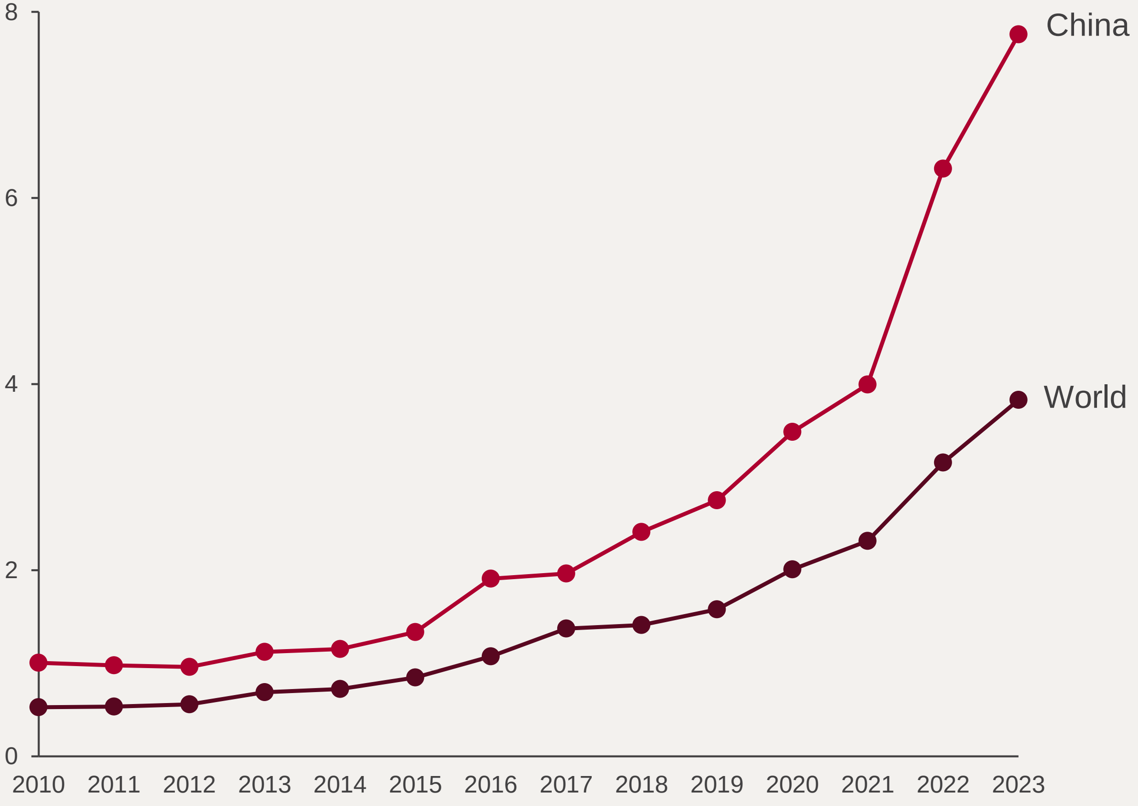
- **First open pit mine** to convert to renewable diesel
- **45,000 tonnes CO_2 equivalent** per year reduction
- **9,600 cars** comparable reduction

MoU with China Baowu

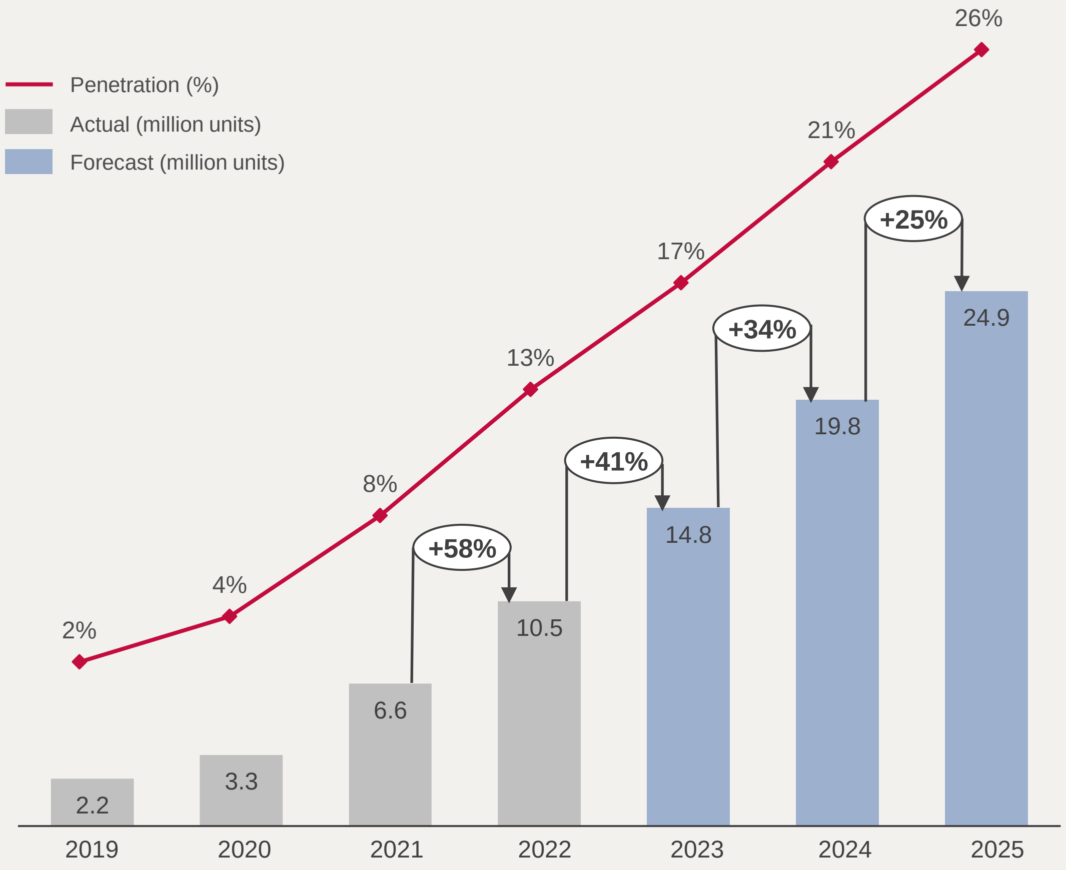
- Working together to help **decarbonise the steel value chain**
- Research, build and demonstrate **pilot-scale electric melter**
- Study options for **low-carbon iron in Western Australia**

Decarbonisation to drive demand for metals

Solar energy contribution to aluminium demand (%)

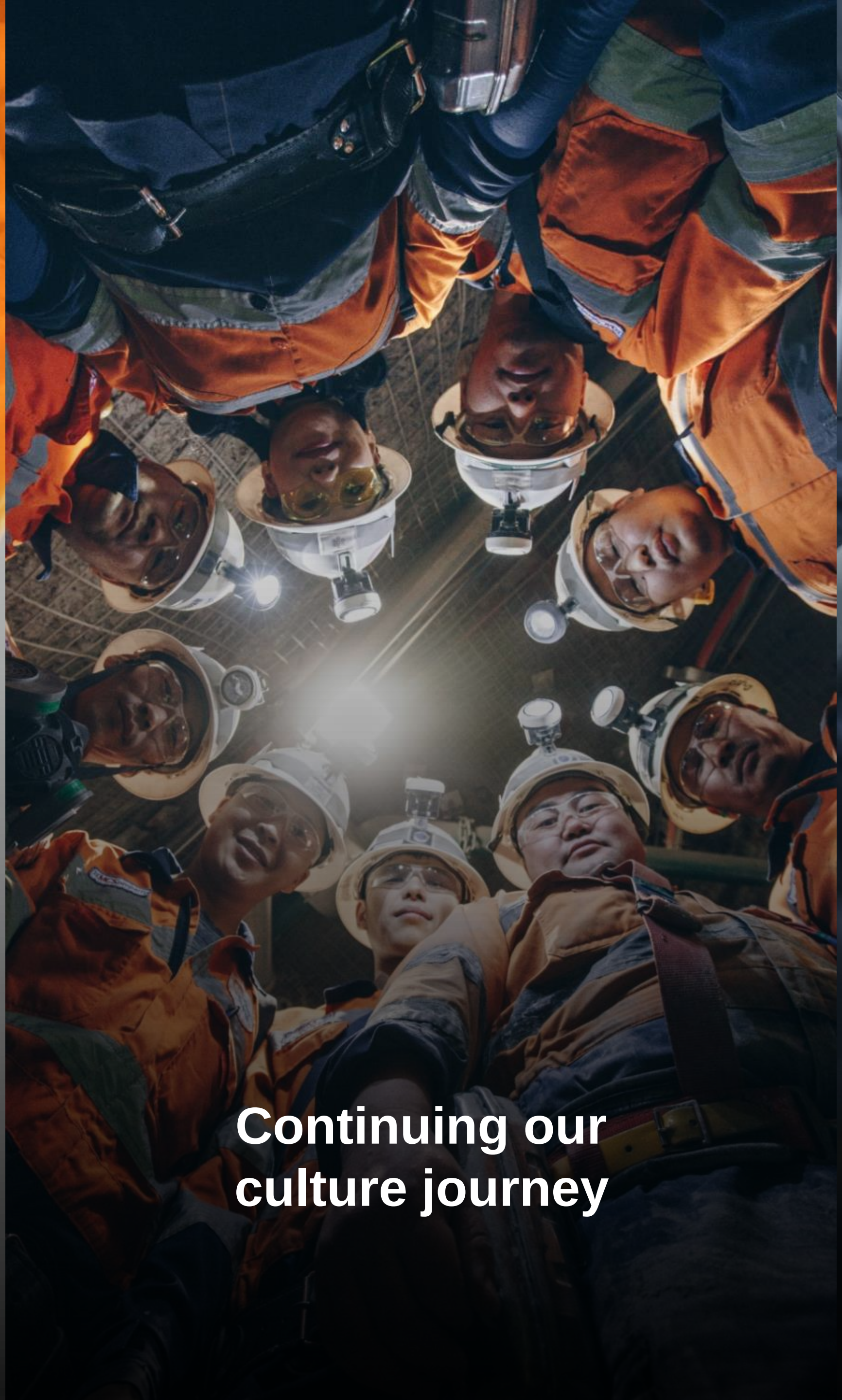


Global EV sales



Source: Rio Tinto Market Analysis, CRU, CPIA, BNEF

Partnering for shared success



Continuing our culture journey

Growing value and future dividend potential

Rio Tinto

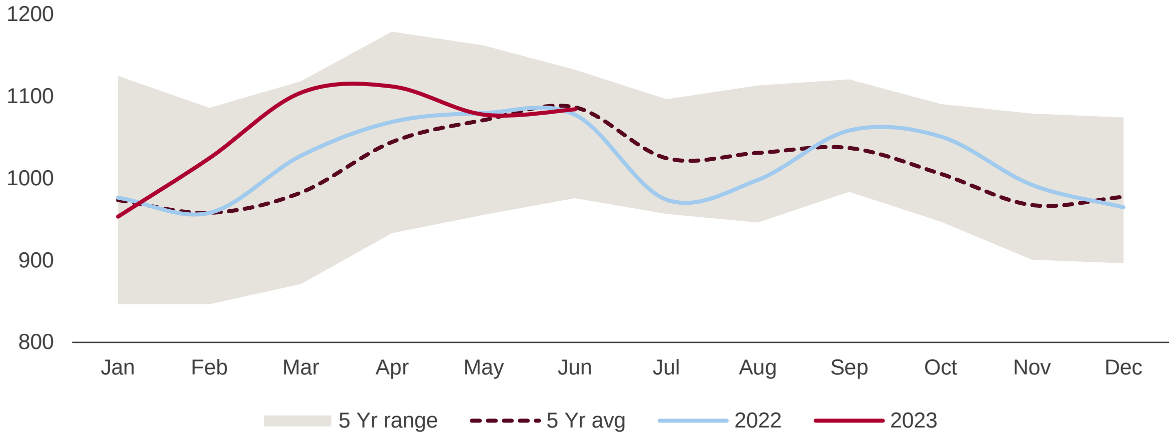
Appendices

2023 interim results

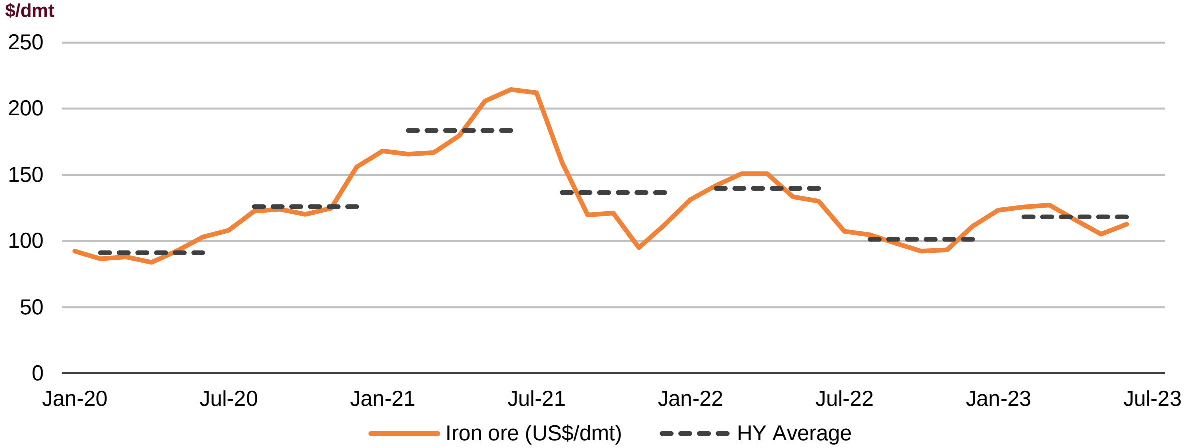
Markets

Strong Chinese iron ore imports absorbing supply gains

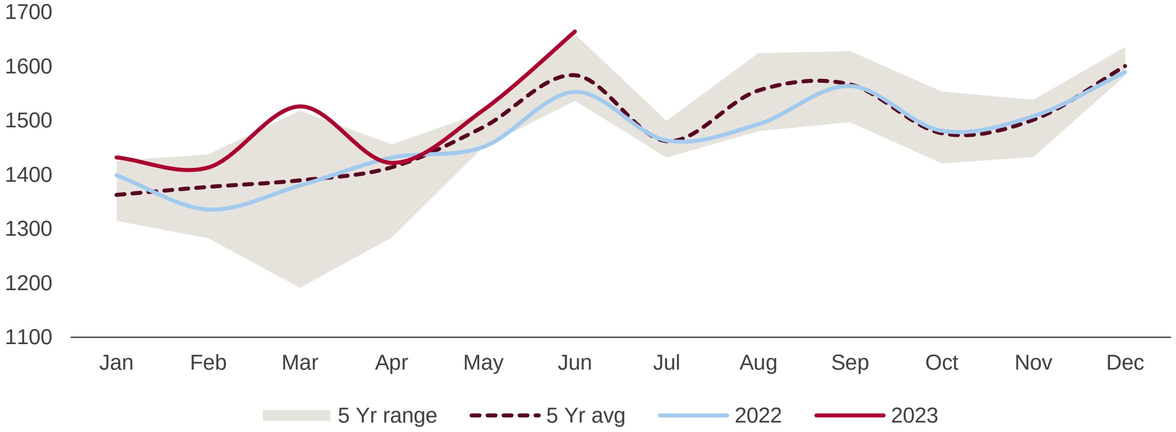
China's crude steel production (Mt annualised)



Iron Ore[1] (-15% YoY)



Seaborne Iron Ore supply run rate (Mt annualised[2])

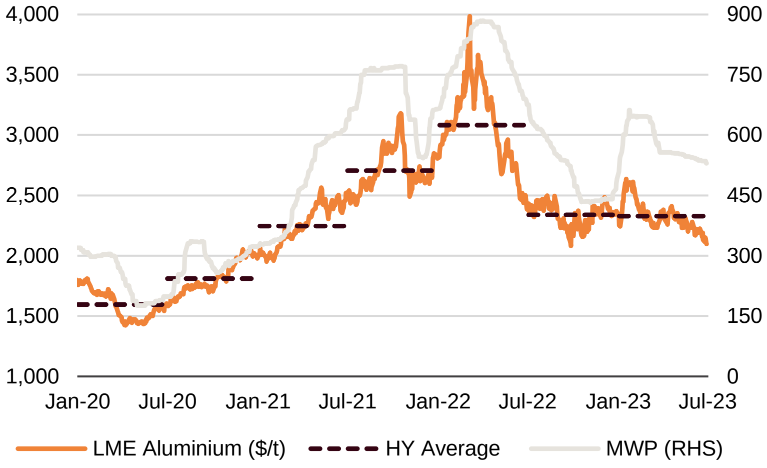


- Although China's steel demand recovery encountered headwinds, crude steel production increased by 3% YoY during H1
- Disruptions to scrap processing and availability, compounded by electricity shortages, helped lift China's pig iron production by 5% YoY during H1
- This absorbed the 6% YoY increase in China's H1 iron ore imports, while domestic iron ore supply continues to experience significant safety and environmental challenges
- Meanwhile, Chinese steel exports trended up sharply towards 100 million tonne annualised run-rates, last observed in 2016
- Seaborne iron ore supply performed strongly during the first half of the year, with June shipments from Australia and Brazil estimated at or close to all-time highs
- Total iron ore exports rose 5% YoY in H1, comprising a 2.5% increase from the major producers, >75% YoY rise of India's shipments, and 10% YoY gains from Canada

[1]Monthly average Platts (CFR) index for 62% iron fines | [2]Total seaborne suppliers annualised, reported at 100% | YoY = change in average price during first half compared to previous year
Sources: Rio Tinto Market Analysis, NBS, Kpler, S&P Global

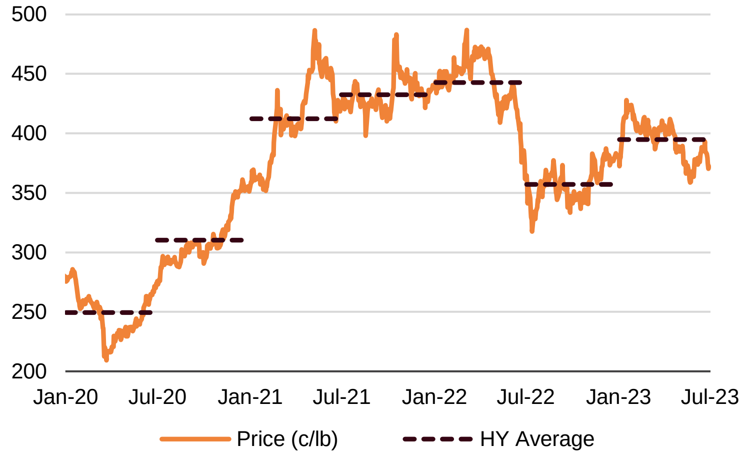
Price support for our commodities compared to H2

Aluminium[1] (-24% YoY)



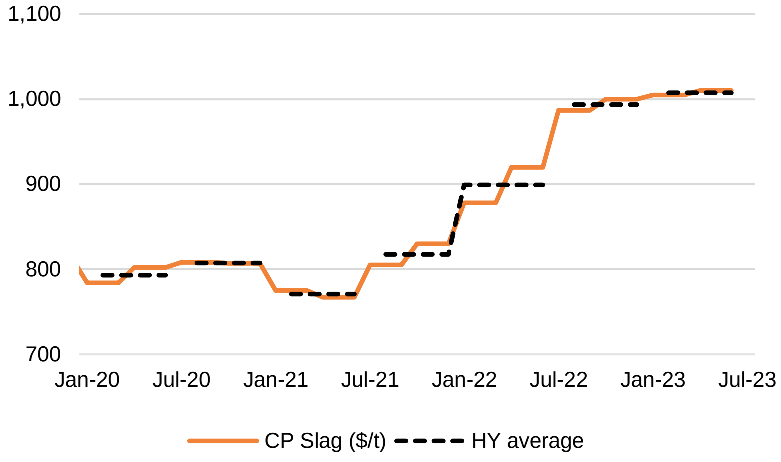
- Global aluminium demand has been resilient in H1, YTD +2% YoY, with growth in automotive and solar markets offsetting weaker demand from the construction sector
- Aluminium production has been stable, as smelting capacity has remained offline in Europe and idle capacity in China has only restarted gradually, resulting in 1% YTD global growth
- Global reported inventories are flat YTD and reported stocks in China have remained low. China imported 0.4Mt of primary aluminium in Jan-May 2023, averting a decline in inventories to unsustainably low levels

Copper[2] (-10% YoY)



- Price rebound from H2 2022, although still lower than last year as global macro uncertainty dampens sentiment
- China demand growth positive despite downturn in construction, driven by electric vehicles and renewable sectors. Demand in US and EU was resilient in Q1 but has softened thereafter
- Mine supply disruptions in Q1 limited material availability; Chile's production YTD remains weak, partially offset by higher production from Peru
- Inventories have fallen sharply after China's seasonal build-up in Q1 (down 50% YoY in June)

TiO_2 (chloride slag) (+12% YoY)



- TiO_2 feedstock prices relatively stable through H1 despite deteriorating market conditions further downstream
- Demand for TiO_2 products has continued to be impacted by weakening macro environment over the first half with construction indicators down across major TiO_2 consuming regions
- Sales volume declines for pigment producers and paint manufacturers in North America and Europe reported in Q1

[1]Average LME price. MWP = US Midwest premium | [2]Average LME price | YoY = change in average price during first half compared to previous year
Sources: Rio Tinto Market Analysis, CME, LME, Mysteel, S&P Global, TZMI

Other financials

Balance sheet remains strong

Disciplined approach is unchanged, we intend to maintain it throughout the cycle

Balance sheet strength is an asset. Offers resilience and creates optionality

Principles-based approach to anchor balance sheet around a single A credit rating

Moody's: A2 (stable), S&P: A (stable)

No net debt target

Our financial strength allows us to simultaneously:

Reinvest for growth (up to $10bn per year in total capex in 2024 and 2025 depending on opportunities)

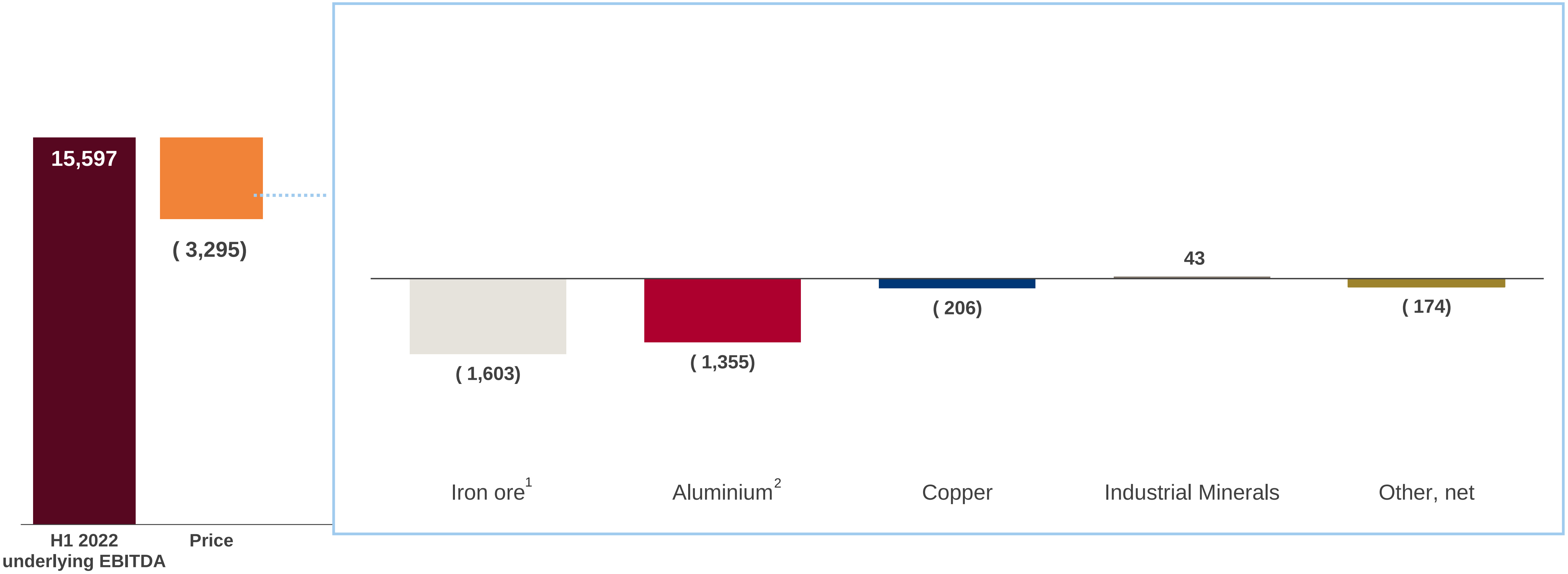
Accelerate our own decarbonisation

Continue to pay attractive dividends in line with our policy (consistent seven-year track record)

$bn	2023	2022	2021
Net cash generated from operating activities	7.0	16.1	25.3
Capital expenditure	3.0	6.8	7.4
Dividends paid	3.7	11.7	15.4
Net (debt)/cash	(4.4)	(4.2)	1.6
Cash and liquid resources	10.4	8.8	15.2
Revolving credit facility (5 year maturity)	7.5	7.5	7.5
Net debt (cash)/Underlying EBITDA	0.19x	0.16x	-0.04x
Gearing	8%	7%	-3%
Weighted average debt maturity	12 yrs	11 yrs	11 yrs

Prices recovering from low point in H2 but still down materially year on year

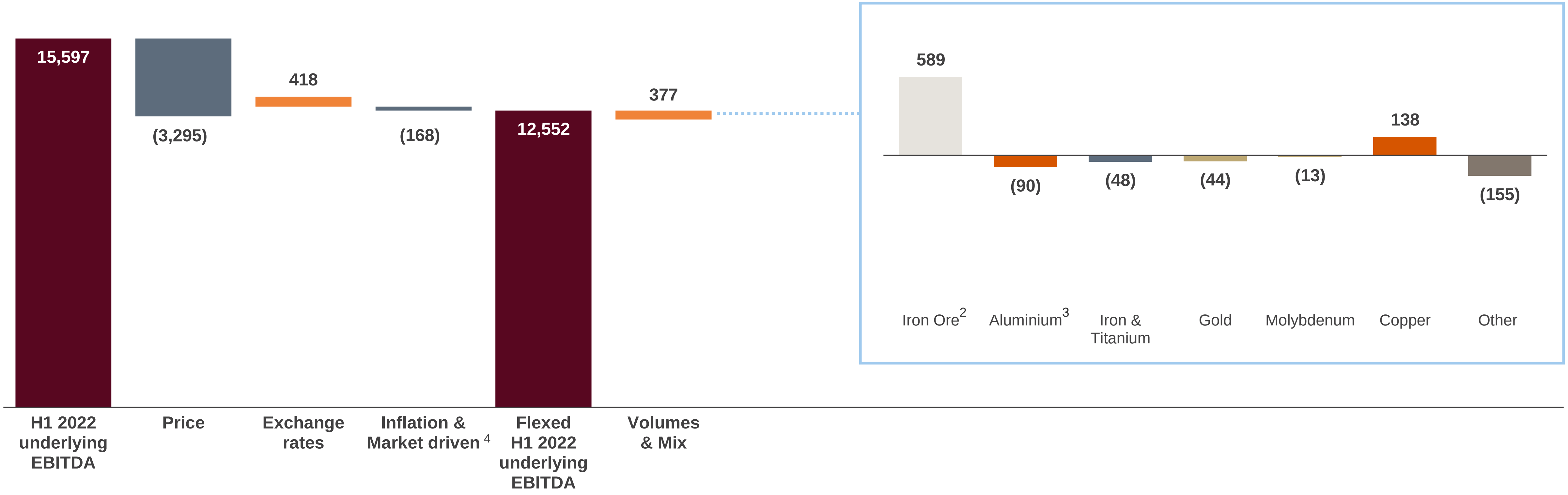
Underlying EBITDA H1 2023 vs H1 2022
$m



[1]Iron ore includes Pilbara, portside trading and IOC | [2]Aluminium includes alumina and bauxite

Higher sales volumes[1] with Gudai-Darri and Oyu Tolgoi underground coming online

Underlying EBITDA H1 2023 vs H1 2022
$m



[1]On a copper equivalent basis | [2]Iron ore includes Pilbara, portside trading and IOC | [3]Aluminium includes alumina and bauxite |
[4]Excludes impact of prices for Aluminium raw materials of $0.1bn, which is reflected in operating cash unit cost

Simplified earnings by Business Unit for H1 2023

	Primary Metal Atlantic	Pacific Aluminium	Copper	Pilbara
Sales volume	**1,172kt**	**501kt**	**314kt[6]**	**139.8Mt[9]**
Average benchmark price	$2,329/t	$2,329/t	396c/lb[7]	$109.8/dmt[10]
Premiums, provisional pricing, by-product sales, product mix, other	$654/t[2]	$263/t[2]	50c/lb	$(2.6)/dmt
Revenue per unit	**$2,983/t[3]**	**$2,592/t[3]**	**446c/lb**	**$107.2/dmt**
Unit cost	$1,756/t[1,4]	$2,177/t[1,4]	244c/lb[1,8]	$21.2/t
Other costs per unit	$562/t[5]	$194/t[5]	11c/lb[5]	$17.7/t[11]
Margin per unit	**$665/t**	**$221/t**	**191c/lb**	**$68.2/t**
Total EBITDA ($m)	**779**	**111**	**1,323**	**9,541**

[1]Calculated using production volumes | [2]Includes Midwest premium duty paid, which was 56% of our volumes in first half 2023 and value added premiums which were 47% of the primary metal we sold | [3]Segmental revenue per Financial Information by Business Unit includes other revenue not included in the realised price | [4]Includes costs before casting | [5]Includes net inventory movements to derive margin per unit on a sales basis | [6]Copper consolidated share, Kennecott and Oyu Tolgoi at 100%, Escondida at 30% | [7]Average LME | [8]C1 copper unit costs on a gross basis (excluding by-product credits) | [9]Consolidated basis | [10]Platts (FOB) index for 62% iron fines | [11]Includes freight and royalties

Iron Ore

Financial metrics ($bn)	H1 2023	H1 2022 comparison	2023 guidance
Segmental revenue	15.6	-6%	
EBITDA	9.8	-6%	
Margin (FOB)[3]	69%	-1pp	
Operating cash flow	6.8	-20%	
Capex	1.1	-26%	Sustaining ~$1.5[4]
Free cash flow	5.6	-20%	
Underlying ROCE	63%	-9pp	
Average realised price[1,3] ($/t)	107.2	-11%	
Unit cost[2,3] ($/t)	21.2	-3%	21.0-22.5

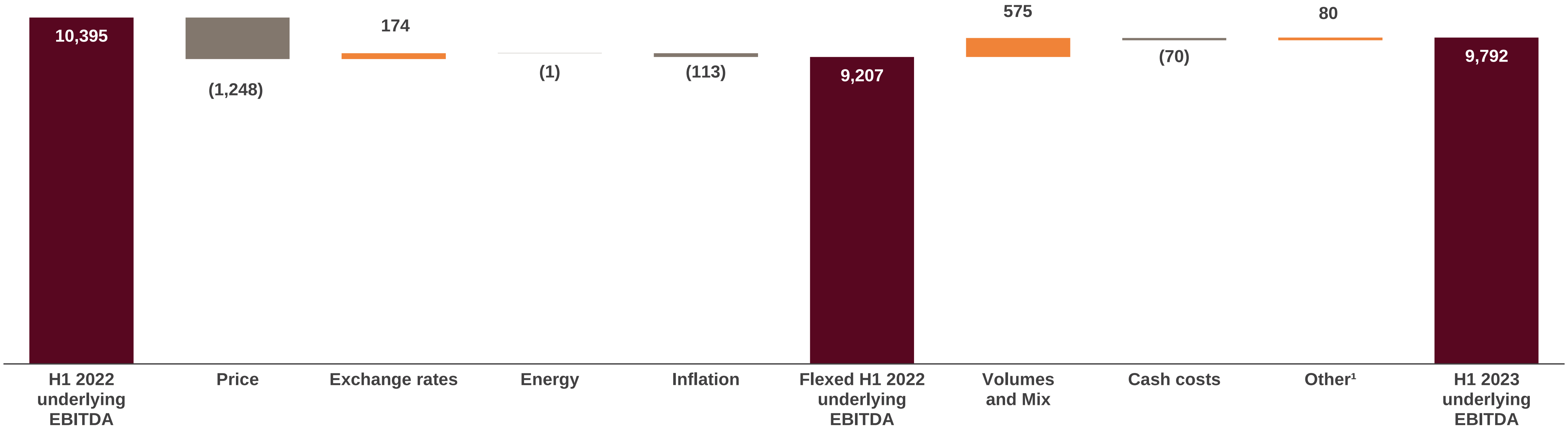
Shipments[3] (Mt, 100% basis)	2023 guidance	H1 2023	2022	2021	2020	2019	2018
Pilbara Blend		105.5	203.9	202.9	232.7	228.1	245.4
Robe Valley		13.1	25.5	25.2	30.3	27.4	32
Yandicoogina		26.2	56.9	56.9	57.7	57.1	57.4
SP10		16.8	35.4	36.6	9.9	14.8	3.4
Total	**320-335**	**161.7**	**321.6**	**321.6**	**330.6**	**327.4**	**338.2**

[1]Dry metric tonne, FOB basis | [2]Unit costs are based on operating costs included in EBITDA and exclude royalties (State and third party), freight, depreciation, tax and interest. Unit costs are stated at an Australian dollar exchange rate of 0.68 for 2023 half year actuals and 0.70 for 2023 guidance | [3]Pilbara only. All other figures reflect Pilbara operations, portside trading and Dampier Salt | [4]Subject to ongoing inflationary pressure

Iron Ore

Sustained improvement in operational performance

Underlying EBITDA H1 2023 vs H1 2022
$m



[1]Other includes Non-cash costs and Exploration & Evaluation expense

Aluminium

Financial metrics ($bn)	H1 2023	H1 2022 comparison	2023 guidance
Segmental revenue	6.3	-20%	
EBITDA	1.1	-60%	
Margin (integrated operations)	21%	-20pp	
Operating cash flow	0.8	-63%	
Capex (excl. EAUs)	0.6	-4%	
Free cash flow	0.2	-89%	
Underlying ROCE	4%	-16pp	
Aluminium realised price[1]	2,866	-25%	
Average alumina price[2]	349	-12%	

Production (Mt, Rio Tinto share)	2023 guidance	H1 2023	2022	2021	2020	2019	2018
Bauxite	54-57*	25.6	54.6	54.3	56.1	55.1	50.4
Alumina	7.4-7.7	3.7	7.5	7.9	8.0	7.7	8.0
Aluminium	3.1-3.3	1.6	3.0	3.2	3.2	3.2	3.2

* In the lower end of the range

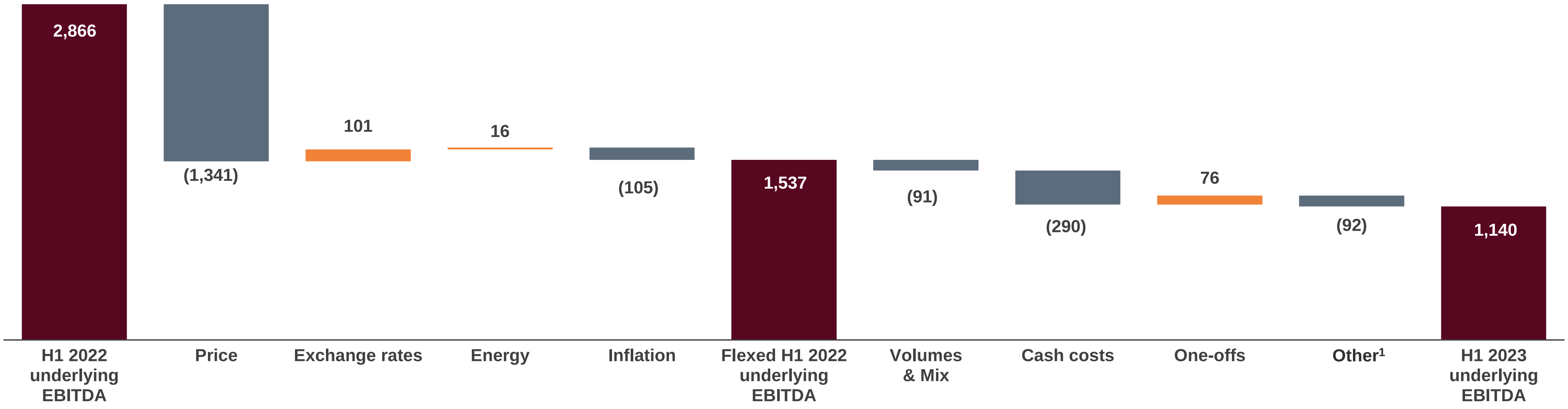
[1]LME plus all-in premiums (product and market) | [2]Platts Alumina PAX FOB Australia

Aluminium

Price declines drive margins down; lower raw material costs to flow through in H2

Underlying EBITDA H1 2023 vs H1 2022

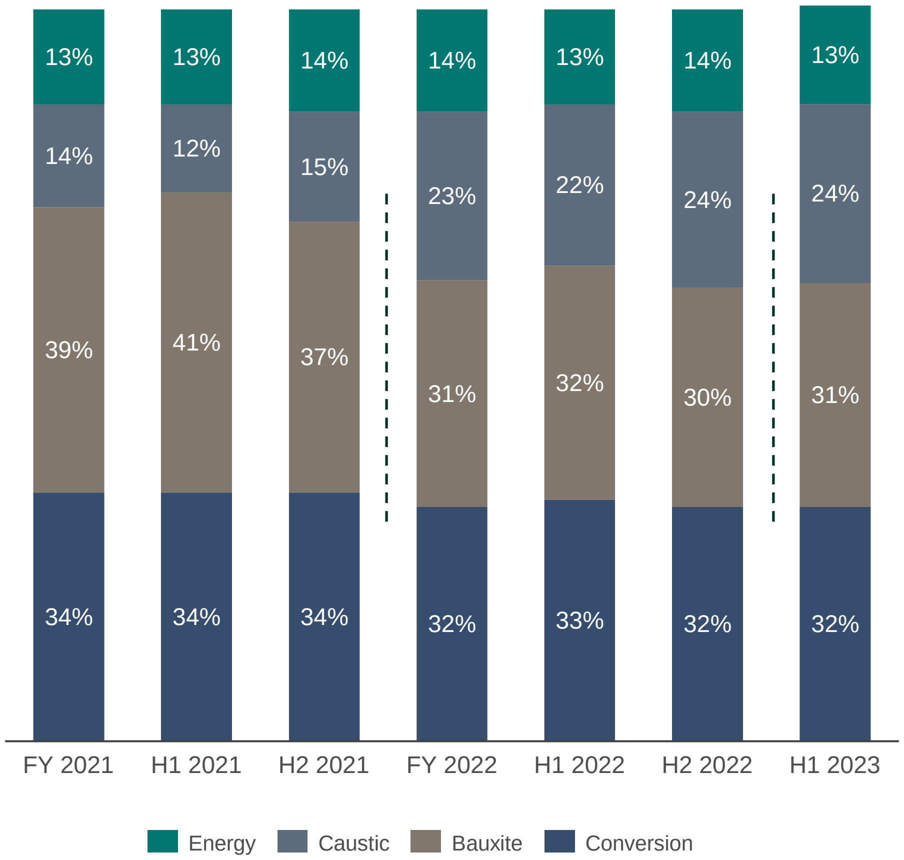
$m



[1]Other includes Non-cash costs and Exploration & Evaluation expense

Composition of alumina and aluminium production costs

Production cash costs (alumina refining)



Input Costs	H1 2021 Index price	H2 2021 Index price	H1 2022 Index Price	H2 2022 Index price	H1 2023 Index Price	Inventory Flow [4]	FY23 Annual Cost Sensitivity
Caustic Soda [1]	274 $/t	535 $/t	675 $/t	595 $/t	432 $/t	3 – 4 months	$10m per $10/t
Natural Gas [2]	2.85 $/t	4.59 $/t	6.02 $/t	7.01 $/t	2.61 $/t	0 - 1 month	$4m per $0.10/GJ
Fuel Oil [3]	64.6 $/bbl	76.3 $/bbl	105.9 $/bbl	93.8 $/bbl	79.2 $/bbl	N/A	$2m per $10/barrel

1. NE Asia FOB
2. Henry Hub
3. Brent
4. Based on quarterly standard costing (moving average)

Input Costs	H1 2021 Index price	H2 2021 Index price	H1 2022 Index Price	H2 2022 Index price	H1 2023 Index Price	Inventory Flow [4]	FY23 Annual Cost Sensitivity
Alumina [5]	288 $/t	369 $/t	395 $/t	328 $/t	349 $/t	1 -2 months	$64m per $10/t
Petroleum Coke [6]	373 $/t	491 $/t	695 $/t	719 $/t	636 $/t	2 -3 months	$11m per $10/t
Coal Tar Pitch [7]	748 $/t	818 $/t	1103 $/t	1476 $/t	1399 $/t	1 - 2 months	$2m per $10/t

5. LME Australia
6. US Gulf (FOB)
7. North AM (FOB)

Copper

Financial metrics ($bn)	H1 2023	H1 2022 comparison	2023 guidance
Segmental revenue	3.5	-2%	
EBITDA	1.1	-29%	
Margin (integrated operations)	43%	-11pp	
Operating cash flow	0.4	-63%	
Capex (excl. EAUs)	0.9	+26%	
Free cash flow	(0.5)	-45%	
Underlying ROCE[1]	4%	-6pp	
Copper realised price[2]	396	-11%	
Unit cost[3]	184c/lb	+24%	180-200

Production (Mt, Rio Tinto share)	2023 guidance	H1 2023	2022	2021	2020	2019	2018
Mined copper[4]	590 to 640	290	521	494	528	577	608
Refined copper	160 to 190	95	209	202	155	260	275

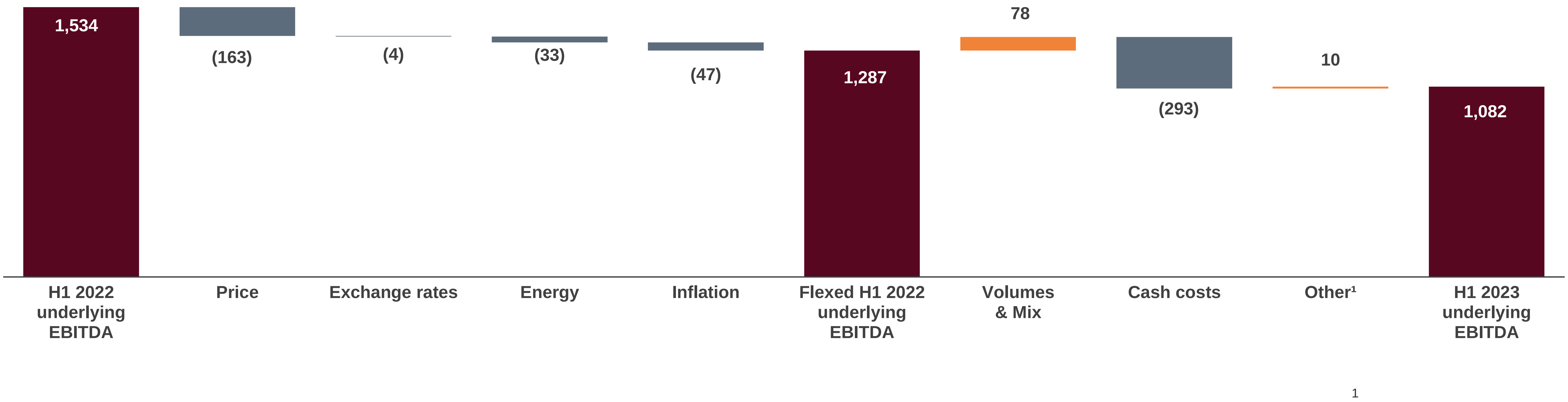
[1]Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed | [2]Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which negatively impacted revenues in H1 2023 by $4m (2022 first half negative impact of $30m) | [3]Unit costs for Kennecott, OT and Escondida utilises the C1 unit cost calculation where Rio Tinto has chosen Adjusted Operating Costs as the appropriate cost definition. C1 costs are direct costs incurred in mining and processing, plus site G&A, freight and realisation and selling costs. Any by-product revenue is credited against costs at this stage | [4]2023 mined copper guidance includes Oyu Tolgoi on a 100% consolidated basis and continues to reflect our 30% share of Escondida. This followed Rio Tinto's acquisition of Turquoise Hill Resources which completed on 16 December 2022. Oyu Tolgoi production prior to 2023 reported on a 33.52% Rio Tinto share basis

Copper

Margins remain robust despite 10% decline in LME price

Underlying EBITDA H1 2023 vs H1 2022

$m



[1] Other includes Non-cash costs and Exploration & Evaluation expense

Oyu Tolgoi: Set to triple copper production

Metrics[1,2]	Unit	2022 Act	2023 - 2027	2028 - 2036	LOM[3]
Ore processed	Mt	39	40	42	40
Head grade (Cu)	%	0.42	0.97	1.28	0.82
Recovery (Cu)	%	80	87	90	84
Concentrate volume	dmt	616	1,078	1,608	1,010
Concentrate grade (Cu)	%	21	31	30	27
Copper production	Kt	130	~340	~500	~290
Gold production	Koz	184	~360	~330	~260

Construction of infrastructure to support ramp up to full production on track

Gold remains a valuable by-product

Producing high quality concentrate attractive to Chinese smelters

[1]Based on the Oyu Tolgoi Feasibility Study 2020 (OTFS20) | [2]See supporting references for the production targets underpinning these financial forecasts on slide 2 | [3]LOM = life of mine (2022 – 2051)

Oyu Tolgoi: Expect to turn free cash flow positive after significant investment

Annualised basis forecast[1], real terms, US$bn			
Financials[2]:	**2023 – 2025 (3 years)**	**2026 – 2029 (4 years)**	**2030 – 2033 (4 years)**
Gross Revenue	1.5 – 2.9	3.8 – 4.6	4.2 – 5.1
Development Capex[3]	0.5 – 0.7	-	-
Sustaining Capex[3]	0.5 – 0.6	0.3 – 0.4	0.2 – 0.3
Opex[4]	0.9 – 1.1	1.0 – 1.2	1.0 – 1.2

[1]Based on long term consensus copper prices of ~US$3.70/lb and gold prices of ~US$1,500/oz | [2]See supporting references for the production targets underpinning these financial forecasts on slide 2 | [3]Development capital relates to the remaining Hugo North Lift 1 scope. Drilling and studies are ongoing for Hugo North Lift 2 | [4]Opex relates to operating costs, excluding royalties, corporate tax and depreciation

Oyu Tolgoi: Funding profile

Project finance[1]	Shareholder funds[2]	Equity
$3.9b	$7.7b	$4.2b

Participants	Facility
European Bank for Reconstruction and Development	A-loan
IFC International Finance Corporation World Bank Group	A-loan
EDC	Export Credit Agency
Export-Import Bank of the United States	Export Credit Agency
EFIC Export Finance & Insurance Corporation	Export Credit Agency
Commercial banks	B-loan (70%)
	MIGA-insured (30%)
	Total Commercial Loans (100%)
Total	

Funding Requirement
$1.6-1.7b
(Jun 2023 - Dec 2024)

$1.6-1.7 billion to be secured by **Rio Tinto Sponsored Senior Loan Agreement** with terms and conditions that mirror the existing project finance facility

Expect to be **cashflow positive from 2025 onwards** to fund the remaining scope of the underground construction

[1]Excludes interest | [2]Principals for Grid Loan 2 ($5.4 billion), Grid Loan 3 ($0.7 billion) and Prepayment ($1.6 billion); excludes interest

Minerals

Financial metrics ($bn)	H1 2023	H1 2022 comparison
Segmental revenue	2.9	-15%
EBITDA	0.7	-45%
Margin (product group operations)	30%	-10 pp
Operating cash flow	0.09	-86%
Capex	0.3	+13%
Free cash flow	0.2	-165%
Underlying ROCE[2]	13%	-8 pp

Production (Rio Tinto share)	2023 guidance	H1 2023	2022	2021	2020	2019	2018
IOC (Mt)	10.0-11.0	4.7	10.3	9.7	10.4	10.5	9.0
Borates – B_2O_3 content (kt)	~0.5Mt	257	532	488	480	520	512
Titanium dioxide slag (kt)	1.1-1.4Mt*	589	1,200	1,014	1,120	1,206	1,116
Diamonds[1] (kt)	3.0-3.8Mt	1,924	4,651	3,847	3,731	4,031	4,358

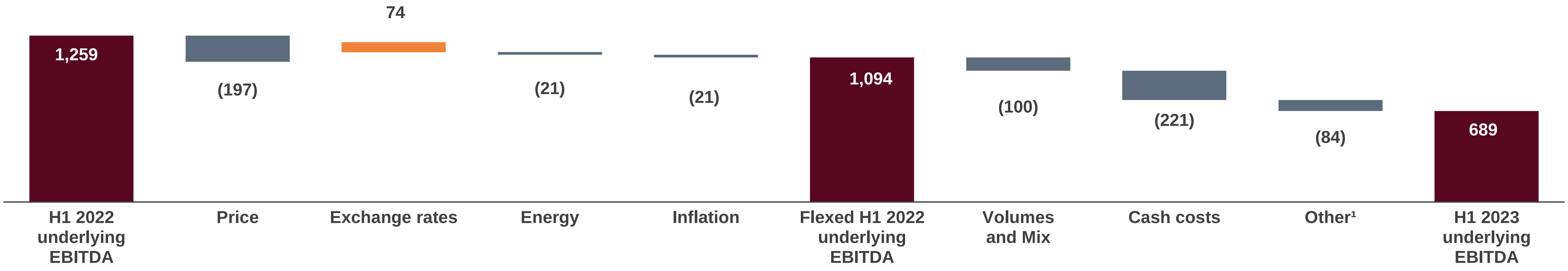
* In the lower end of the range

[1]Diavik only. On 17 November 2021, Rio Tinto's interest in Diavik increased from 60% to 100%. Production and financials reflect this from 1 November 2021 | [2]Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed

Minerals

Challenging market conditions; forest fires at IOC impact production

Underlying EBITDA H1 2023 vs H1 2022
$m



[1]Other includes Non-cash costs and Exploration & Evaluation expense

Cash flow reconciliation

H1 2023 Cash Flow (US$m)	Statutory cash flow	*Reconciling items*	Underlying cash flow
Profit after tax for the year/Underlying EBITDA	4,947		11,728
Adjustments for:			
• Taxation	1,983		
• Finance items	748		
• Share of profit after tax of equity accounted units	(431)	*(611)*[1]	(1,042)
• Impairments	1,175	*1,175*	-
• Depreciation and amortisation	2,485		
• Provisions (including exchange differences on provisions)	63	*29*	92
Utilisation of provisions	(492)		(492)
Change in working capital	(927)		(927)
Other items	(116)	*192*	76
Cash flows from consolidated operations	**9,435**		
Dividends from EAUs	287		287
Net interest paid	(286)		(286)
Dividends paid to non-controlling interests	(46)		(46)
Tax paid	(2,415)		(2,415)
Net cash generated from operating activities	**6,975**		
Purchases of PPE			(3,001)
Sales of PPE			8
Lease principal payments			(213)
Free cash flow			**3,769**

Utilisation of provisions

Close down and restoration	(333)
Post-retirement benefits and other employee benefits	(115)
Other provisions	(44)
	(492)

Change in working capital

Inventories	(293)
Trade and other receivables	(6)
Trade and other payables	(628)
	(927)

Other items

	Statutory	*Reconciling items*	Underlying
Change in non-debt derivatives	(73)	*112*[2]	39
Depreciation transferred	(88)	*88*[3]	-
Other items[2,3]	45	*(8)*	37
	(116)	***192***	**76**

[1]Relates to Finance items, tax, depreciation & amortisation of EAUs which is not included in Underlying EBITDA | [2]Relates to exclusions not included in Underlying EBITDA | [3]Part of the reconciling items include depreciation in E&E expenditure and depreciation transferred not recognised in underlying cashflows

Modelling EBITDA

Underlying EBITDA sensitivity

	Average published price/ exchange rate for HY 2023	US$m impact on full year 2023 underlying EBITDA of a 10% change in prices/exchange rates
Aluminium - US$ per tonne	2,329	1,151
Copper - US cents per pound	396	523
Gold - US$ per troy ounce	1,932	59
Iron ore realised price (FOB basis) - US$ per dry metric tonne	107.2	2,786
Australian dollar against the US dollar	0.68	712
Canadian dollar against the US dollar	0.74	369
Oil (Brent) - US per barrel	86	193

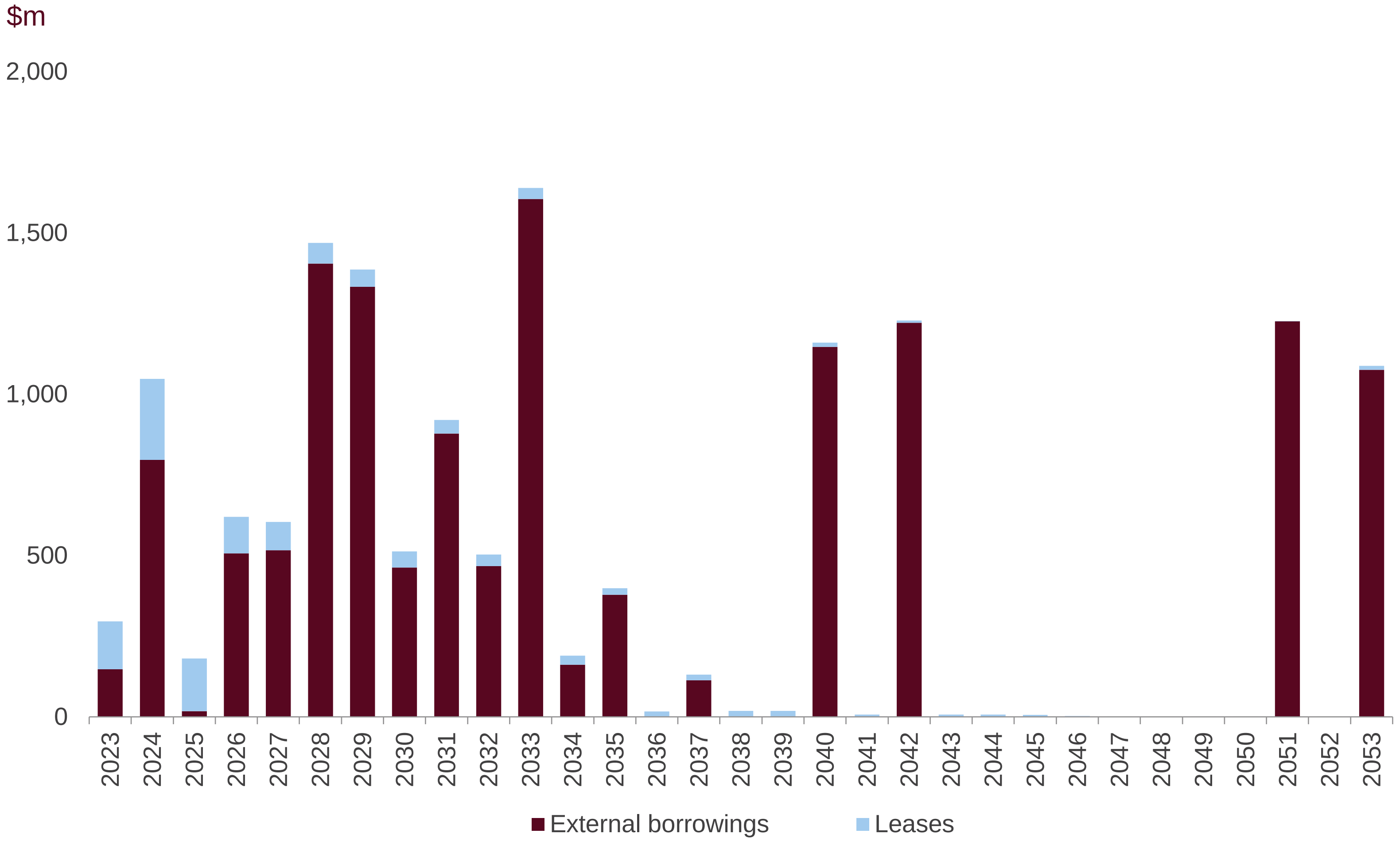
Note: The sensitivities give the estimated effect on underlying EBITDA assuming that each individual price or exchange rate moved in isolation. The relationship between currencies and commodity prices is a complex one and movements in exchange rates can affect movements in commodity prices and vice versa. The exchange rate sensitivities include the effect on operating costs but exclude the effect of revaluation of foreign currency working capital

Income Statement: exclusions

	June 2023			June 2022		
	Per Interim release	Exclusions	Underlying	Per Interim release	Exclusions	Underlying
Consolidated sales revenue	26,667		26,667	29,775		29,775
Net operating costs (excluding items disclosed separately)	(17,535)	(141)	(17,676)	(17,202)	(89)	(17,291)
Impairment reversals/(charges net of reversals)	(1,175)	1,175	-	-		-
Exploration and evaluation expenditure (net of profit relating to interests in undeveloped projects)	(710)		(710)	(367)		(367)
Operating profit	**7,247**	**1,034**	8,281	**12,206**	**(89)**	**12,117**
Share of profit after tax of equity accounted units	431		431	468		468
Profit before finance items and taxation	**7,678**	**1,034**	8,712	**12,674**	**(89)**	**12,585**
Net exchange gains/(losses) on external and intragroup net (debt)/cash balances	103	(103)	-	387	(387)	-
Net losses on derivatives not qualifying for hedge accounting	32	(32)	-	(205)	205	-
Finance income	245		245	17		17
Finance costs	(536)		(536)	(55)		(55)
Amortisation of discount on provisions	(592)		(592)	(503)		(503)
Finance items	**(748)**	**(135)**	(883)	**(359)**	**(182)**	**(541)**
Profit before taxation	**6,930**	**899**	7,829	**12,315**	**(271)**	**12,044**
Taxation	(1,983)	(298)	(2,281)	(2,867)	(16)	(2,883)
Profit after tax for the year	**4,947**	**601**	5,548	**9,448**	**(287)**	**9,161**
• attributable to owners of Rio Tinto (net earnings)	5,117	603	5,720	8,943	(281)	8,662
• attributable to non-controlling interests	(170)	(2)	(172)	505	(6)	499

Debt maturity profile

30 June 2023 debt maturity profile[1]



- On 6 March, issued $1.75bn SEC-registered debt securities, extending the corporate bond debt maturity by ~2 years. Issuance consisted of:
  - $650m 10-year 5.000% coupon maturing in 2033
  - $1,100m 30-year 5.125% coupon maturing in 2053
- At 30 June weighted average outstanding debt maturity of corporate bonds ~16 years (~12 years for Group debt)
- No corporate bond maturities until 2024
- Liquidity remains strong under stress tests
- $7.5bn back-stop Revolving Credit Facility matures in November 2027. It has an additional one-year extension option

[1]Based on June 2023 accounting value. The debt maturity profile shows ~$1.2bn of capitalised leases under IFRS 16

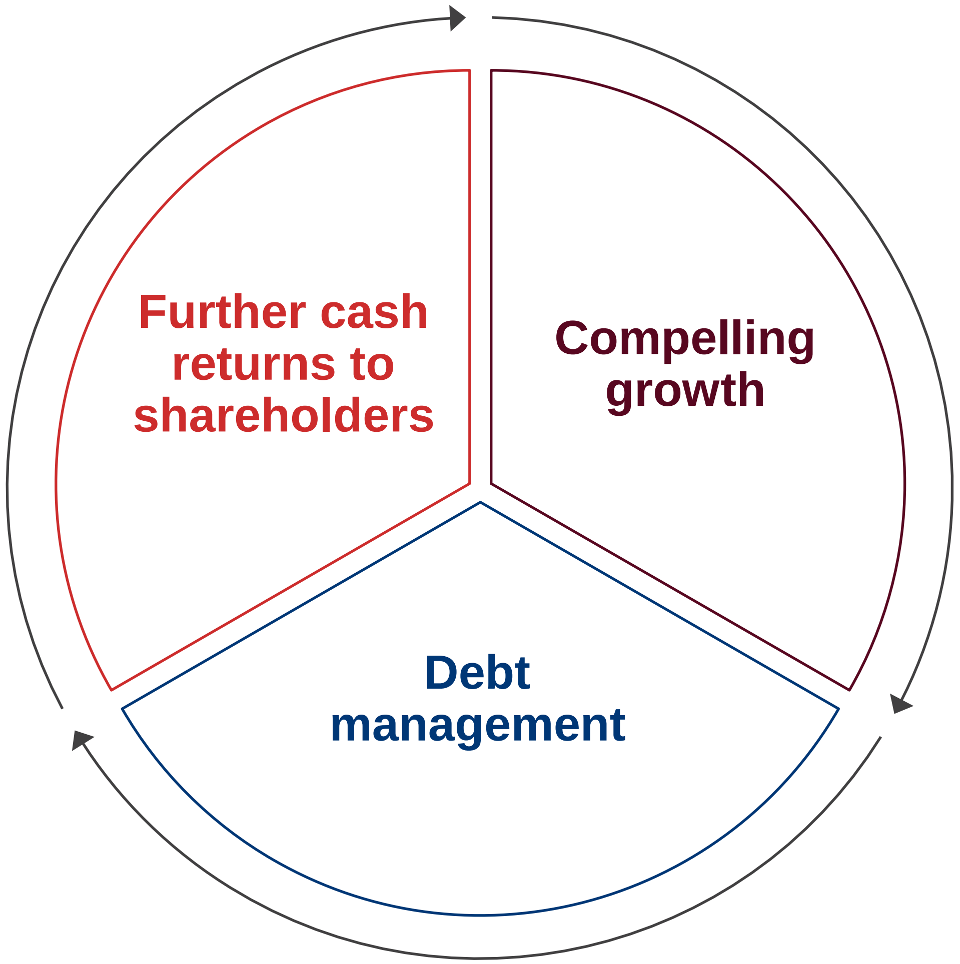
Guidance

Balancing near-term returns to shareholders

1 **Essential capex**
Integrity, Replacement, Decarbonisation

2 **Ordinary dividends**

3 **Iterative cycle of**



Group level financial guidance

	2023	2024	2025
Capex			
Total Group	~$7.0bn[1]	Up to 10.0bn	Up to 10.0bn
Group Growth Capex	$1.5bn[2]	Up to $3bn	Up to $3bn
Group Sustaining Capex	~$3.5bn	~$3.5bn	~$3.5bn
Pilbara Sustaining Capex	*~$1.5bn*[3,4]	*~$1.5bn*[4,5]	*~$1.5bn*[4,5]

- Replacement capital of $2-3bn per year

Effective tax rate	~30%		
Returns	Total returns of 40 – 60% of underlying earnings through the cycle		

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[1]Excluding Simandou | [2]We expect our share of investment in Simandou to around $0.5 billion in H2 2023. This guidance assumes all Simandou costs are capitalised in the second half of the year following the signature of agreements between the joint venture parties | [3]Subject to ongoing inflationary pressure | [4]Pilbara sustaining capex included within Group sustaining | [5]Calculated in real terms

Product group level guidance

	2023 Production Guidance
Pilbara iron ore shipments	320 – 335Mt[1] (100% basis)
Copper	
Mined Copper (consolidated basis)	590 – 640kt[2]
Refined Copper	160 – 190kt
Aluminium	
Bauxite	54 – 57Mt[3]
Alumina	7.4 – 7.7Mt
Aluminium	3.1 – 3.3Mt
Minerals	
TiO_2	1.1 – 1.4Mt[3]
IOC pellets and concentrate[4]	10.0 – 11.0Mt
B_2O_3	~0.5Mt
Diamonds	3.0 – 3.8m carats

	2023 Unit cost guidance[4]
Pilbara Iron ore ($/tonne)	$21.0 – $22.5
Copper C1 (US cents/lb)	180 – 200

[1]In the upper half of the range. Pilbara shipments guidance remains subject to weather, market conditions and management of cultural heritage | [2]Includes Oyu Tolgoi on a 100% consolidated basis and continues to reflect our 30% share of Escondida | [3]In the lower end of the range | [4]Iron Ore Company of Canada | [4]FY23 guidance is based on A$:US$ exchange rate of 0.70

Application of the returns policy

Capital return considerations	Comments
Results for HY 2023	• Operating cash flow of **$7.0bn** • FCF of **$3.8bn**[1] • Underlying earnings down 34**%** to **$5.7bn**
Long-term growth prospects	• Focused on Oyu Tolgoi • Simandou project progressing • Investing in replacing high quality assets in Pilbara and Kennecott • Ongoing exploration and evaluation programme
Balance sheet strength	• Strong balance sheet with net debt of **$4.4bn**
40-60 per cent of underlying earnings through the cycle	• **Interim pay-out of 50%** based on (i) Strong financial performance in 2023 (ii) strong balance sheet (iii) outlook
Balanced between growth and shareholder returns	• Defined growth pipeline and a strong balance sheet providing capacity for shareholder return • Our priority is to generate long-term value by consistently implementing our strategic objectives through the cycle • We continue to maintain our capital discipline in times of macro-economic challenge and uncertainty • We have made additional returns in times of surplus cash flow and lower capital needs and we will continue to pay attractive dividends to our shareholders in line with our pay-out policy
Outlook	• China's economic recovery has fallen short of initial market expectations, as the property market downturn continues to weigh on the economy and consumers remain cautious despite monetary policy easing. Manufacturing data in advanced economies showed a further slowdown and recessionary risks remain

[1]Free cash flow is defined as net cash generated from operating activities less purchases of PP&E less lease principal payments plus sales of PP&E

Safe Production System and Decarbonisation

Safe Production System (SPS)

Best operator

Building a lasting competitive advantage with our people. We want to empower them to safely run assets that are in control, capable and performing better than any of our competitors.

Care	Courage	Curiosity

Decarbonisation abatement programmes

Programme	Description & key sites	Funding mechanism	Example project - economics
Pacific Operations Repower	**Renewables: smelters** Boyne | Tomago	• Long-term market contracts • Government partnerships	• Commercial solutions achieved through government partnerships and long-term contracts • Assets will need to remain competitive
Renewables	**Solar & wind renewables** Pilbara | Weipa QMM | Kennecott | RBM	• Capital - build own operate • Long-term market contracts	• Phase 1 – 230MW solar + 200MWh of on-grid battery storage is value accretive at a carbon price of <$40/t driven by $55m reduction in gas displacement costs at current prices
Diesel	**HME & Diesel switching** Ph I: Bio-fuels Ph II: Fleet electrification Pilbara | IOC	• Capital • Land acquisitions (non-edible feedstock) • HME	• Bio-fuels: comparable cost to diesel[1] and de-risking of technical risk in fleet electrification • Diesel cost savings post fleet electrification
Alumina process heat	**Electrification of boilers** **Process & energy efficiency** **H_2 calcination – replacement** Vaudreuil | QAL | Yarwun	• R&D • Capital	• QAL double digestion is value accretive at zero carbon price driven by reducing bauxite, raw material and energy costs • A subset of projects are value accretive at a carbon price of $50/t to $100/t
Mineral processing	**New technologies** **Electrification of boilers** IOC | RTIT | Borates	• R&D • Capital • Government / industry partnerships	• IOC steam plant fuel reduction - 40MW electric boiler conversion is value accretive at a zero carbon price • The electrification of the boilers will require new commercial renewable energy contracts as well as capital
Aluminium anodes	**ELYSIS™ technology** All smelters	• R&D • Capital	• Commercial scale technology from 2024 • Value generation through scale-up later
Nature-based Solutions	**High quality offsets** 8 large scale sites	• Capital land acquisitions • Operating costs	• Development costs of high-quality projects on or near our assets are currently estimated at $20-50/t CO_2e, the range reflects varying project types and landscapes

[1]At our Boron site due to Californian subsidies

Common acronyms

AHS	Automous Haulage System	**EC**	European Commission	**Mtpa**	Million tonnes per annum	**RTFT**	Rio Tinto Fer et Titane
AIFR	All Injury Frequency Rate	**EMEA**	Europe, Middle East and Africa	**MACC**	Marginal Abatement Cost Curve	**RTIO**	Rio Tinto Iron Ore
Al	Aluminium	**ESG**	Environmental, Social, and Governance	**MW**	Megawatt	**RTX**	Rio Tinto Exploration
AL_2O_3	Aluminium oxide	**EU**	European Union	**MWh**	Megawatt hour	**SPS**	Safe Production System
ARDC	Arvida Research and Development Centre	**Fe**	Iron	**NbS**	Nature-based Solutions	**S&P**	Standard & Poor's
ASX	Australian Securities Exchange	**FOB**	Free On Board	**NPV**	Net present value	**T**	Tonne
ATS	Aluminium Technology Solutions	**FS**	Feasibility Study	**O&M**	Operation & Maintenance	**t/ha**	Tonnes per hectare
B_2O_3	Boric oxide	**GHG**	Greenhouse gas	**OT**	Oyu Tolgoi	**tLS**	Tonnes of liquid steel
Bn	Billion	**GFC**	Global Financial Crisis	**Pa**	Per annum	**tCO_2 e**	Tonne of carbon dioxide equivalent
BF	Blast furnace	**Gt**	Giga tonnes	**PJ**	Petajoule	**TiO_2**	Titanium dioxide
BOF	Blast Oxygen Furnace	**GW**	Gigawatt	**PPA**	Power Purchasing Agreement	**tpa**	Tonnes per annum
BSL	Boyne Smelter Limited	**H_2**	Hydrogen	**PP&E**	Plant. Property & Equipment	**TWh**	Terawatt hour
CAGR	Compound annual growth rate	**HBI**	Hot briquetted iron	**QAL**	Queensland Alumina Limited	**UB**	Ulaanbaatar
CCGT	Combined Cycle Gas Turbine	**HG**	High grade ore	**QMM**	QIT Madagascar Minerals	**USD**	United States dollar
CCUS	Carbon capture, utilisation and storage	**HME**	Heavy Mining Equipment	**R&D**	Research and development	**VAP**	Value-added product
CCS	Carbon Capture and Storage	**IEA**	International Energy Agency	**RBM**	Richards Bay Minerals	WA	Western Australia
CO_2	Carbon dioxide	**IOC**	Iron Ore Company of Canada	**RE**	Renewable Energy	**WTS**	Western Turner Syncline
CO_2e	Carbon dioxide equivalent	**IRR**	Internal rate of return	**RRF**	Recovery and Resilience Facility	**YoY**	Year on Year
Cu	Copper	**JV**	Joint Venture	**ROCE**	Return on capital employed	**YTD**	Year to date
DRI	Direct Reduction Iron	**LCE**	Lithium Carbonate Equivalent	**RT**	Rio Tinto		
EAF	Electric Arc Furnace	**LCOE**	Levelised Cost of Energy	**RTE**	Round trip efficiency		
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation	**M**	Millions				
		Mt	Million tonnes				

Definitions

Calculated abatement carbon price

The levelised marginal cost of abatement at a zero carbon price

Calculation:
Discounted sum of all abatement costs over time at a zero carbon price /
Discounted sum of all abated emissions over time

Discounted at the hurdle rate RT uses for all investment decisions

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