Rio Tinto

2021
Full Year results

Grow, decarbonise and deliver attractive shareholder returns

23 February 2022

Operations Centre, Perth. Western Australia

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 statement.

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.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Rio Tinto, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding Rio Tinto’s present and future business strategies and the environment in which Rio Tinto will operate in the future. Among the important factors that could cause Rio Tinto’s actual results, performance or achievements to differ materially from those in the forward-looking statements include, but are not limited to: an inability to live up to Rio Tinto’s values and any resultant damage to its reputation; the impacts of geopolitics on trade and investment; the impacts of climate change and the transition to a low-carbon future; an inability to successfully execute and/or realise value from acquisitions and divestments; the level of new ore resources, including the results of exploration programmes and/or acquisitions; disruption to strategic partnerships that play a material role in delivering growth, production, cash or market positioning; damage to Rio Tinto’s relationships with communities and governments; an inability to attract and retain requisite skilled people; declines in commodity prices and adverse exchange rate movements; an inability to raise sufficient funds for capital investment; inadequate estimates of ore resources and reserves; delays or overruns of large and complex projects; changes in tax regulation; safety incidents or major hazard events; cyber breaches; physical impacts from climate change; the impacts of water scarcity; natural disasters; an inability to successfully manage the closure, reclamation and rehabilitation of sites; the impacts of civil unrest; the impacts of the Covid-19 pandemic; breaches of Rio Tinto’s policies, standard and procedures, laws or regulations; trade tensions between the world’s major economies; increasing societal and investor expectations, in particular with regard to environmental, social and governance considerations; the impacts of technological advancements; and such other risks identified in Rio Tinto’s most recent Annual Report and accounts in Australia and the United Kingdom and the most recent Annual Report on Form 20-F filed with the United States Securities and Exchange Commission (the “SEC”) or Form 6-Ks furnished to, or filed with, the SEC. Forward-looking statements should, therefore, be construed in light of such risk factors and undue reliance should not be placed on forward-looking statements. These forward-looking statements speak only as of the date of this report. Rio Tinto expressly disclaims any obligation or undertaking (except as required by applicable law, the UK Listing Rules, the Disclosure Guidance and Transparency Rules of the Financial Conduct Authority and the Listing Rules of the Australian Securities Exchange) to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in Rio Tinto’s expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

Nothing in this presentation should be interpreted to mean that future earnings per share of Rio Tinto plc or Rio Tinto Limited will necessarily match or exceed its historical published earnings per share.

Disclaimer

Neither this presentation, nor the question and answer session, nor any part thereof, may be recorded, transcribed, distributed, published or reproduced in any form, except as permitted by Rio Tinto. By accessing/ attending this presentation, you agree with the foregoing and, upon request, you will promptly return any records or transcripts at the presentation without retaining any copies.

This presentation contains a number of non-IFRS financial measures. Rio Tinto management considers these to be key financial performance indicators of the business and they are defined and/or reconciled in Rio Tinto’s annual results press release, Annual Report and accounts in Australia and the United Kingdom and/or the most recent Annual Report on Form 20-F filed with the SEC or Form 6-Ks furnished to, or filed with, the SEC.

Reference to consensus figures are not based on Rio Tinto’s own opinions, estimates or forecasts and are compiled and published without comment from, or endorsement or verification by, Rio Tinto. The consensus figures do not necessarily reflect guidance provided from time to time by Rio Tinto where given in relation to equivalent metrics, which to the extent available can be found on the Rio Tinto website.

By referencing consensus figures, Rio Tinto does not imply that it endorses, confirms or expresses a view on the consensus figures. The consensus figures are provided for informational purposes only and are not intended to, nor do they, constitute investment advice or any solicitation to buy, hold or sell securities or other financial instruments. No warranty or representation, either express or implied, is made by Rio Tinto or its affiliates, or their respective directors, officers and employees, in relation to the accuracy, completeness or achievability of the consensus figures and, to the fullest extent permitted by law, no responsibility or liability is accepted by any of those persons in respect of those matters. Rio Tinto assumes no obligation to update, revise or supplement the consensus figures to reflect circumstances existing after the date hereof.

Jakob Stausholm

Chief Executive

Melbourne, Australia

Delivering on our objectives in order to grow, decarbonise and deliver attractive shareholder returns

Best operator

Transform our safe operating performance

Empower our workforce through Rio Tinto Safe Production System

Impeccable ESG credentials

Accelerate our own decarbonisation

Help our customers develop products and services that decarbonise

Excel in development

Grow in commodities enabling the global energy transition

Deliver value-adding growth whilst maintaining financial strength and resilience

Social licence

Attractive partner to our customers and host countries
Partner and restore trust within the community for shared success

Record full year results and new direction

0.40
All injury frequency rate (AIFR)

Zero fatalities
Third consecutive year

Evolving our culture
Partnering with experts, living our values

New strategy in 2021
Underpinned by four key objectives

Ambitious emissions targets
-15% by 2025, -50% by 2030

$38bn
Underlying EBITDA

44%
Underlying ROCE

FCF of $18bn
Net cash of $1.6bn

$13.0bn*
Taxes & government royalties

$16.8bn
Dividends declared to shareholders

*Taxes and government royalties in respect of underlying earnings in 2021

Evolving our culture

Living our values: **Care, Courage, Curiosity**

Creating a **safe, respectful and inclusive** work environment

Implementing all 26 recommendations **from the Everyday Respect** report; visible shift in attitudes and behaviours over the last 12 months

Empowering the front line through **Rio Tinto Safe Production System**

Different mindset, controlled risk-taking to grow

Leadership development training

Peter Cunningham

Chief Financial Officer

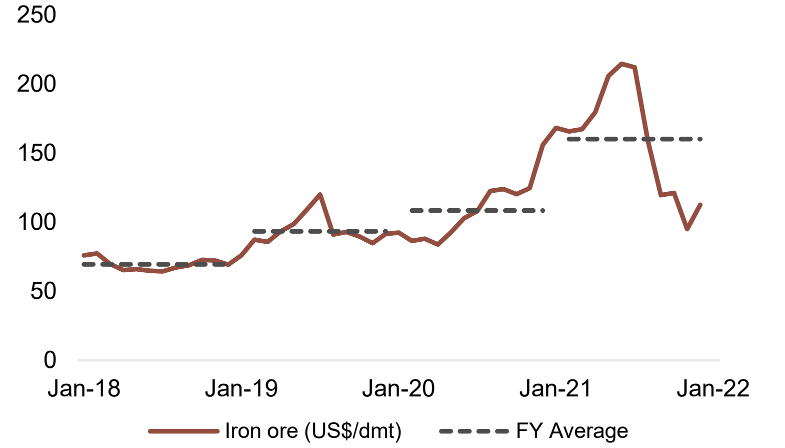
New Zealand Aluminium Smelter (NZAS)

Record financial results

($bn, except for per share data)	2021	2020	Comparison
Consolidated sales revenue	**63.5**	44.6	**+42%**
Underlying EBITDA	**37.7**	23.9	**+58%**
Underlying earnings	**21.4**	12.4	**+72%**
Net earnings	**21.1**	9.8	**+116%**
Underlying ROCE	**44%**	27%	**n/a**
Cash flow from operations	**25.3**	15.9	**+60%**
Capital expenditure	**7.4**	6.2	**+19%**
Free cash flow	**17.7**	9.4	**+88%**
Total dividend	**16.8**	9.0	**+87%**
Total dividend per share ($)	**10.40**	5.57	**+87%**
Net cash / (debt)	**1.6**	(0.7)	

Robust demand drives commodity prices

Iron Ore[1] (+48% YoY)

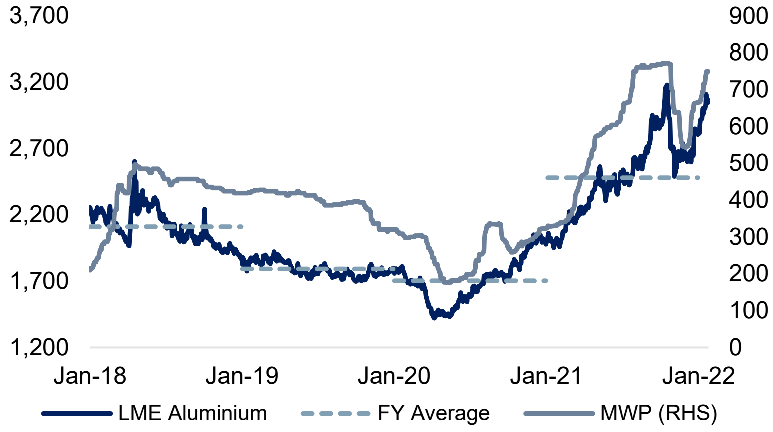


Despite weaker demand and mill operating restrictions during H2, China's FY21 crude steel production exceeded 1Bnt for the second time in history. Demand recovery in the rest of world maintained its momentum

Combined shipments of the major low-cost producers remained below FY18 volumes for the third consecutive year

Less high-cost supply was needed to balance the market during H2 21, while prices declined 25% half on half

Aluminium[2] (+46% YoY)

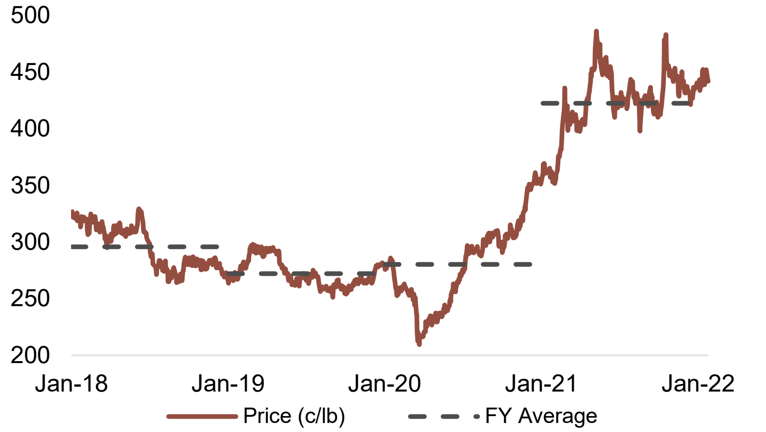


Strong global demand recovery led by packaging, transport and building and construction

Increase in global deficit on extensive power related smelter curtailments in China and Europe

Lower global inventories supportive of high market and product premiums

Copper[3] (+50% YoY)



Exchange inventories declined to multi-year lows

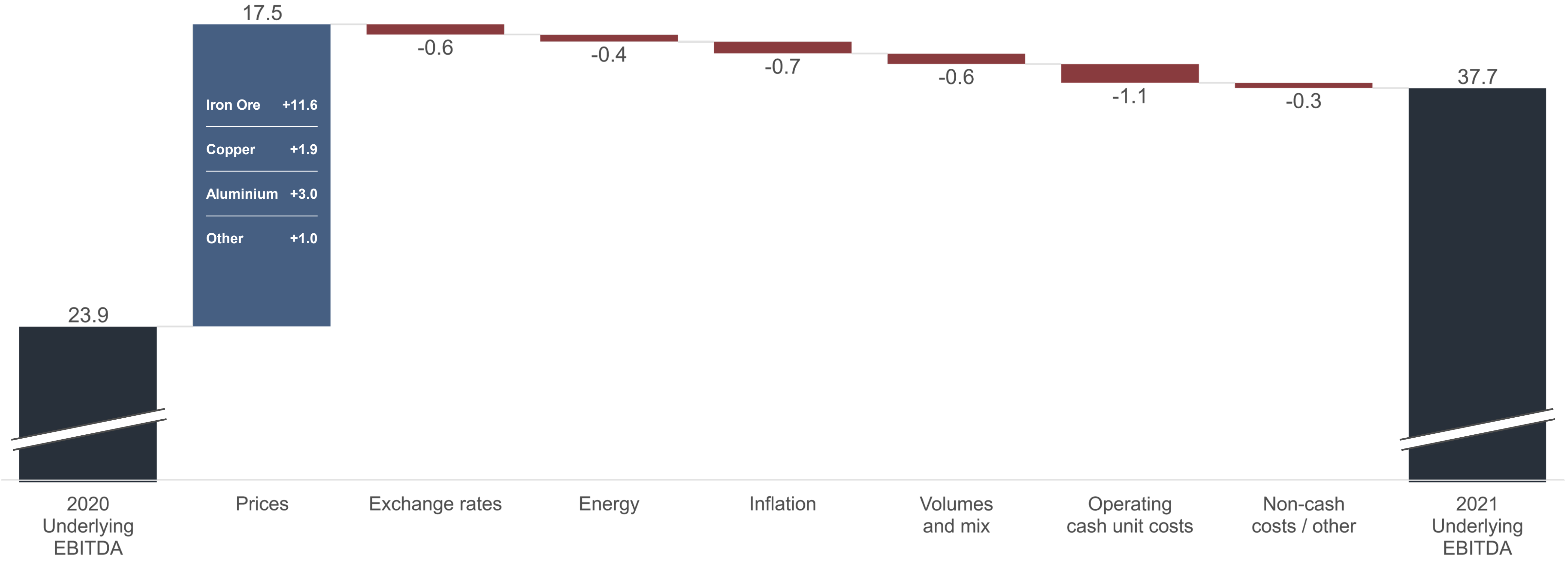
Demand grew strongly through 2021 with a pick-up in the rest of the world in H2

Mine supply returned to growth, but many regions continued to face headwinds from lingering effects of COVID-19, workforce constraints and adverse weather conditions

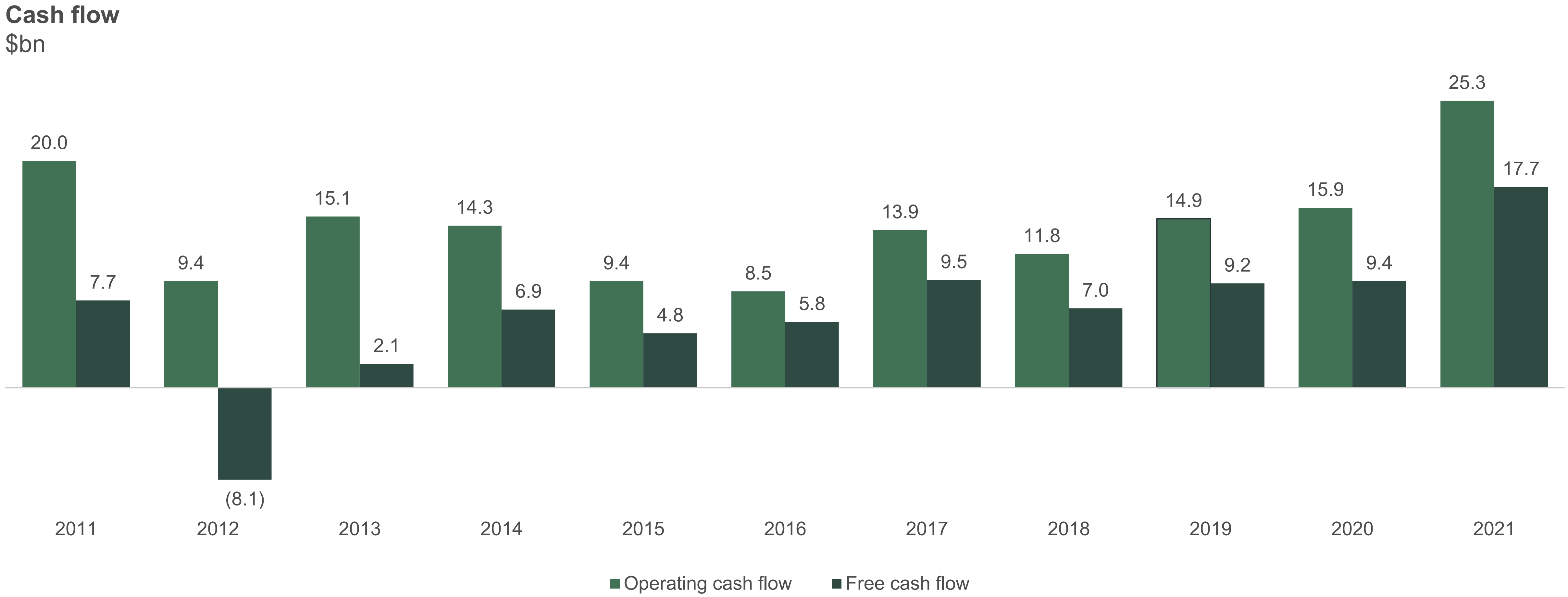
[1] Monthly average Platts (CFR) index for 62% iron fines | [2] Average LME price. MWP = Mid-West premium | [3] Average LME price | YoY = change in annual average price. Source: Rio Tinto

Strong conversion of price into earnings…

Underlying EBITDA
$bn



…and strong conversion of earnings into cash flows



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
Operating cash flow and free cash flow include capital gains tax paid on disposals of $0.9bn in 2019, $0.1bn in 2018 and $0.2 bn in 2017, primarily related to coal disposals

Iron Ore

Strong financial result despite challenging conditions

Operating metrics	2021	2020 comparison	2022 guidance
Average realised price[1, 3]	$143.8/t	+ 45%	
Shipments[3] (100% basis)	321.6Mt	- 3%	320-335Mt
Unit cost[2, 3]	$18.6/t	+ 26%	$19.5-21.0

Financial metrics ($bn)			
Gross product sales	39.6	+ 44%	
EBITDA	27.6	+ 46%	
Margin (FOB)[3]	76%	+ 2 pp	
Operating cash flow	19.2	+ 45%	
Capex	3.9	+ 34%	Sustaining ~1.5
Free cash flow	15.2	+ 48%	
Underlying ROCE	100%	+ 26 pp	

Production impacted by above average rainfall in H1, cultural heritage management and tie-in of growth and replacement mines

Higher volumes of SP10 due to timing of project completion

Commissioning and ramp-up of growth and replacement mines impacted by COVID-19: access to labour and supply chain quality issues

Kept focus on fixed costs. Higher input prices including labour, explosives, energy, stronger AUD, increase in mine work index and operational readiness costs

Genuine progress made with Traditional Owner Groups, continue discussions on agreement making in 2022

[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. Guidance reflects rising input prices and labour costs, an increased mining work index and higher mine processing plant maintenance, partially offset by the ramp-up of Gudai-Darri and continued efficiency improvements. Unit costs are stated at an Australian dollar exchange rate of 0.75 and exclude any additional COVID-19 response costs | [3] Pilbara only. All other figures reflect Pilbara operations, portside trading and Dampier Salt

Setting up Pilbara iron ore for stronger performance

First train loaded from mobile crushing and screening at Gudai-Darri with first production from main plant expected for Q2 2022, subject to COVID-19 constraints

Commissioning and ramp up of brownfield mines ongoing, impacted by supply chain quality issues in particular, Mesa A wet plant

Expect elevated quantities of SP10 until mid-year. Pressures to ease with ramp-up of Gudai-Darri and replacement mines. SP10 will then decrease in the medium term

Studies being progressed for new mines*: Western Range, Bedded Hill Top and Hope Downs 2 and Brockman Syncline 1. Delivering system capacity alongside RTSPS** initiatives to improve efficiencies across the network

Modernising agreements across all Traditional Owner partners. Heads of Agreements are currently being drafted with two Traditional Owner groups to define principles of partnership and co-management

Sustaining capex unchanged at $1.5bn. Investing to improve asset health and reliability

Expanding our tenure for potential wind and solar sites

*Commissioning from 2025 subject to approvals | **Rio Tinto Safe Production System

Aluminium

Outstanding financials with free cash flow more than doubling

Operating metrics	2021	2020 comparison	2022 guidance
Aluminium realised price[1]	$2,899/t	+ 49%	
Average alumina price[2]	$329/t	+ 21%	
Production – bauxite	54.3Mt	- 3%	54-57Mt
Production – alumina	7.9Mt	- 2%	8.0-8.4Mt
Production – aluminium	3.2Mt	- 1%	3.1-3.2Mt
Canadian smelters – hot metal cash costs[3]	$1,373/t	+ 18%	Refer to pg.63
Financial metrics ($bn)			
Gross product sales	12.7	+ 36%	
EBITDA	4.4	+ 104%	
Margin (integrated operations)	38%	+ 12 pp	
Operating cash flow	3.6	+ 87%	
Capex (excl. EAUs)	1.3	+ 29%	
Free cash flow	2.3	+ 155%	
Underlying ROCE	16%	+ 13 pp	

Substantial increase in FCF to $2.3bn, and more than double EBITDA on stable metal operations, higher sales prices and heightened demand for value-added product (VAP)

Gradual restart at Kitimat in 2022 following strike action, production uplift weighted to H2

Bauxite operations struggled with system stability following severe wet weather in Q1 2021 and equipment reliability

ELYSIS joint venture successfully produced aluminium at industrial scale with no direct greenhouse gas emissions

Investment of $87m for 16 new smelting cells at AP60 smelter to increase its annual production by 45%

[1] LME plus all-in premiums (product and market) | [2] Platts Alumina PAX FOB Australia | [3] Operating costs defined as hot metal cash costs for the Canadian smelters (alumina at market price)

Copper

Strong financial results despite COVID-19 and other challenges

Operating metrics	2021	2020 comparison	2022 guidance
Copper realised price[1]	424c/lb	+ 50%	
Production – mined copper	494kt	- 7%	500-575kt
Production – refined copper	202kt	+ 30%	230-290kt
Unit cost[2]	82c/lb	- 26%	130-150c/lb

Financial metrics ($bn)*			
Gross product sales	7.8	+ 58%	
EBITDA	4.0	+ 90%	
Margin (integrated operations)	59%	+ 9 pp	
Operating cash flow	2.6	+ 168%	
Capex (excl. EAUs)	1.3	- 20%	
Free cash flow	1.3	+ 289%	
Underlying ROCE[3]	14%	+ 6 pp	

Strong market conditions due to declining stocks, renewed speculative interest and COVID-related supply constraints

Oyu Tolgoi agreement reached with partners. Underground operations under way. First production in H1 2023

Kennecott – improved smelter performance, copper grade exceeding 0.5% in H2

Temporary increase in grades at OT open pit; continued COVID impacts at Escondida

Costs below 2020 but marginally above guidance: lower throughput and grades at Escondida and higher royalties, offset by higher gold grades at OT. Lower gold volumes and underlying inflation reflected in 2022

[1] Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which positively impacted revenues in 2021 by $246m (2020 positive impact of $182m). | [2] 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 | [3] Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed | *Following a reorganisation of the management team in 2021, the Diamonds business is reported within Minerals and the Simandou iron ore project in Guinea is reported within Copper. 2020 comparatives have been adjusted accordingly

Minerals

Robust financials in operationally challenging year

Operating metrics	2021	2020 comparison	2022 guidance
IOC pellets price[1]	$214/t	+ 68%	
TiO_2 slag price[2]	$785/t	- 2%	
Production – IOC	9.7Mt	- 6%	10.0-11.0Mt
Production – TiO_2	1.0Mt	- 9%	1.1-1.4Mt
Production – Borates	0.5Mt	+ 2%	~0.5Mt
Production – Diamonds	3.8Mct	+ 3%	5.0-6.0Mct[3]
Financial metrics ($bn)*			
Gross product sales	6.5	+ 25%	
EBITDA	2.6	+ 52%	
Margin (product group ops)	43%	+ 8 pp	
Operating cash flow	1.4	+ 28%	
Capex	0.6	+ 42%	
Free cash flow	0.8	+ 19%	
Underlying ROCE[4]	21%	+ 7 pp	

Entered into a binding agreement to acquire the Rincon lithium project in Argentina

IOC – favourable pricing but labour and equipment availability impacted production

RBM resumed operations in August following stabilisation of security situation

QMM in Madagascar operating well and delivering consistent production, construction launch of solar and wind power plant. Unplanned maintenance and equipment reliability issues at RTFT

Diavik – became sole owner in November, strong price recovery following pandemic-related build-up of demand and low inventory

[1] Wet metric tonne | [2] TZMI chloride slag assessment November 2021, excludes UGS | [3] Diamonds guidance is for Diavik only following the closure of Argyle in 2020. Increase in 2021 production reflects 100% ownership of Diavik (previously 60%) from 1st November 2021 | [4] Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed | *Following a reorganisation of the management team in 2021, the Diamonds business is reported within Minerals and the Simandou iron ore project in Guinea is reported within Copper. 2020 comparatives have been adjusted accordingly

Disciplined allocation of capital remains at our core

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

---

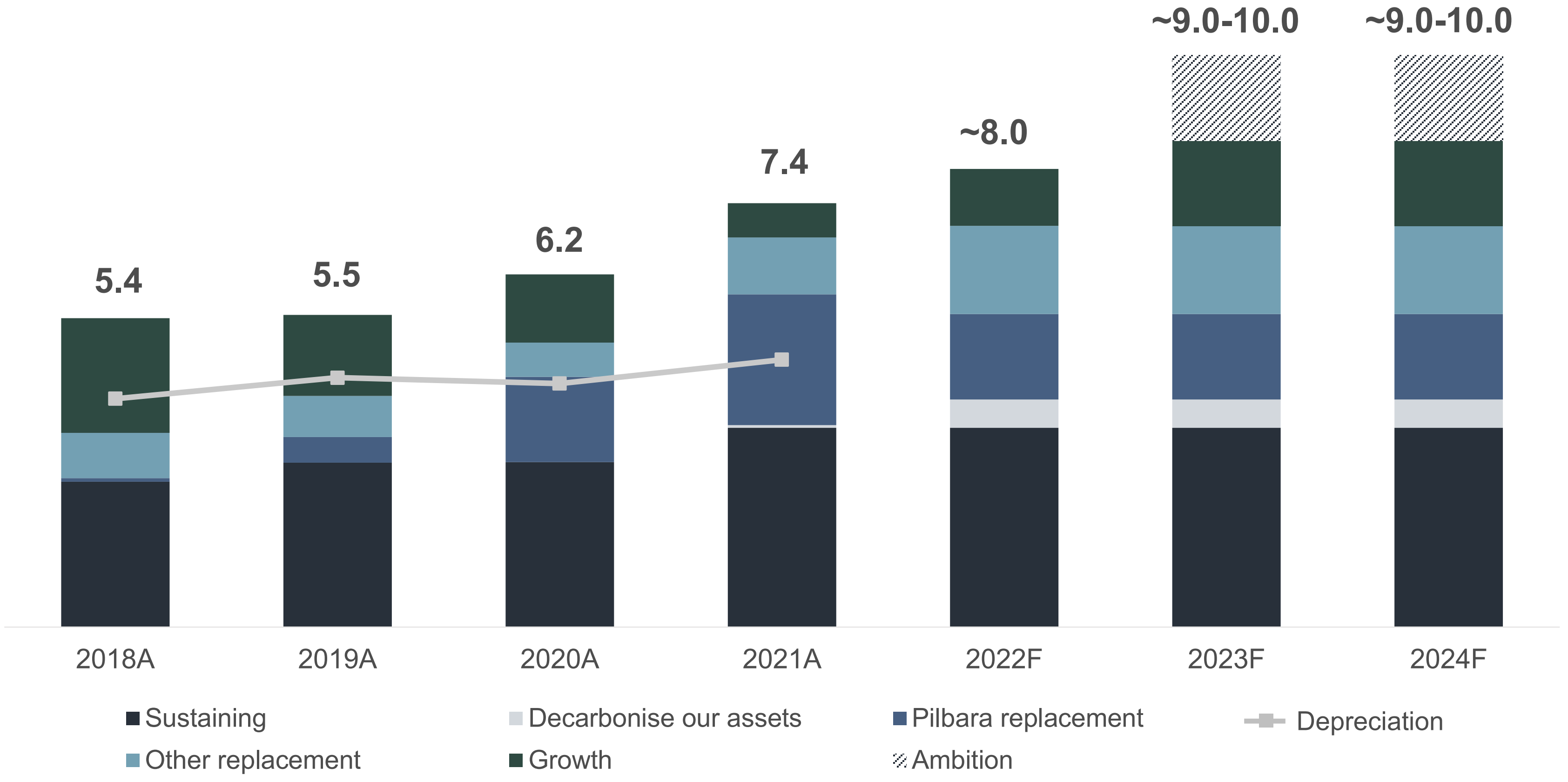
2 **Ordinary dividends**

---

3 **Iterative cycle of...**

Disciplined reinvesting for growth and decarbonisation

Capital expenditure profile
$bn



*Estimated investment as of 31 Dec 2021. Marginal Abatement Cost Curves (MACC) and large decarbonisation projects will be updated regularly | **Subject to potential increases of up to 15% for Pilbara replacement projects in 2022

Ambition to grow and decarbonise reflected in 2023-24 capex of up to ~$9-10bn including up to $3bn in growth investment, depending on opportunities

Total decarbonisation investment of ~$7.5bn* from 2022 to 2030, predominantly in second half of decade

~$0.5bn* per year to decarbonise our assets from 2022 to 2024

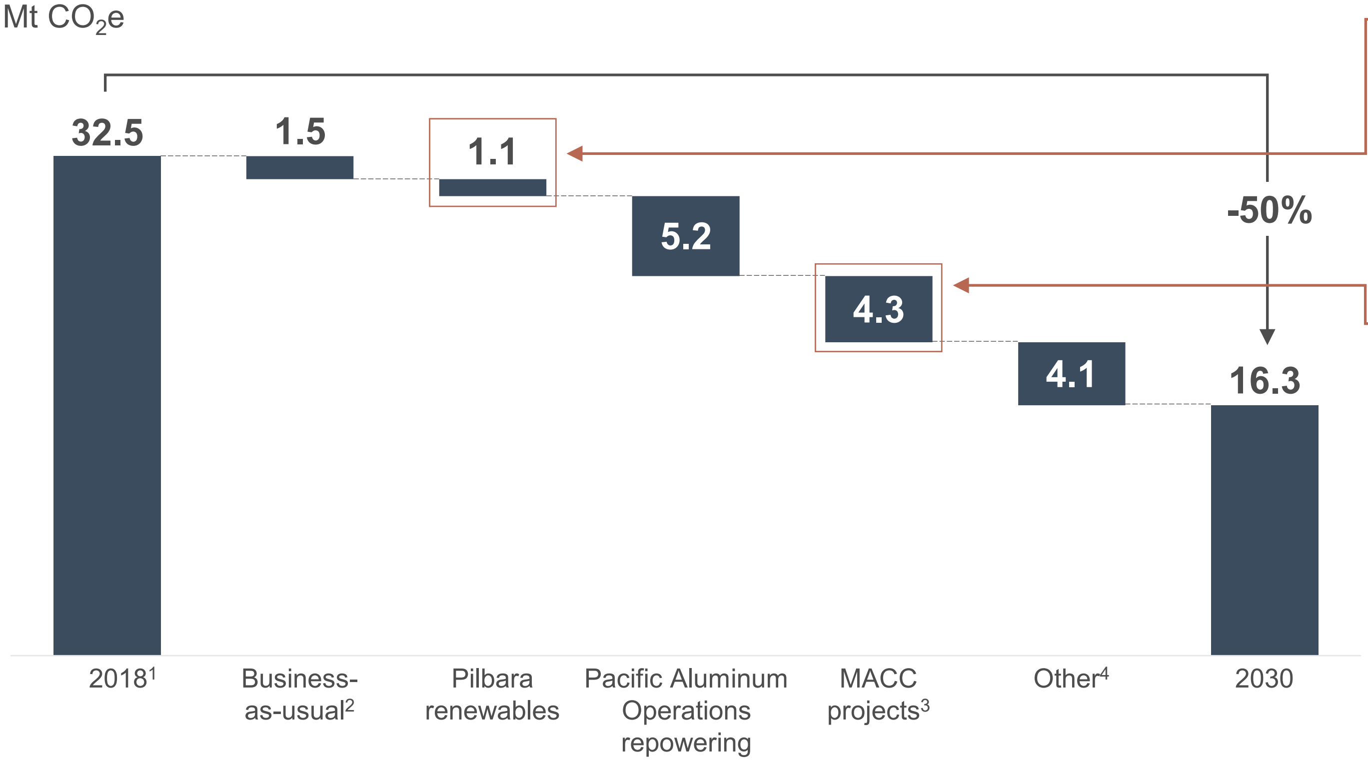
Sustaining capital of ~$3.5bn per year including Pilbara Iron Ore of ~$1.5bn

Replacement spending unchanged at $2-3bn per year**

M&A is in addition

Value accretive decarbonisation investment

$7.5bn of estimated investments[5] between 2022 and 2030 – value accretive in aggregate at a modest carbon price



[1] 2018 Scope 1 and 2 emissions equity baseline, adjusted for divestments | [2] The business-as-usual changes in emissions are the result of volume growth, asset closures and other operational factors | [3] Projects from our Marginal Abatement Cost Curve | [4] Other, including energy efficiency, ELYSIS™ and carbon offsets | [5] The repowering of the two Pacific Aluminium smelters in Australia is assumed to be taking place via power purchase agreement and are not included in the $7.5bn. Estimated investment as of 31 Dec 2021 | *KPMG has provided limited assurance over our scope 1 and 2 target information, the alignment with 1.5C and the roadmap to achieving the target

*See Appendix for further details on projects (slides 37-39)

In the Pilbara we consume $150m pa of gas for electricity generation. Our first GW of renewable capacity can replace ~80% of this

QMM (Madagascar) construction on solar and wind power plant commenced*

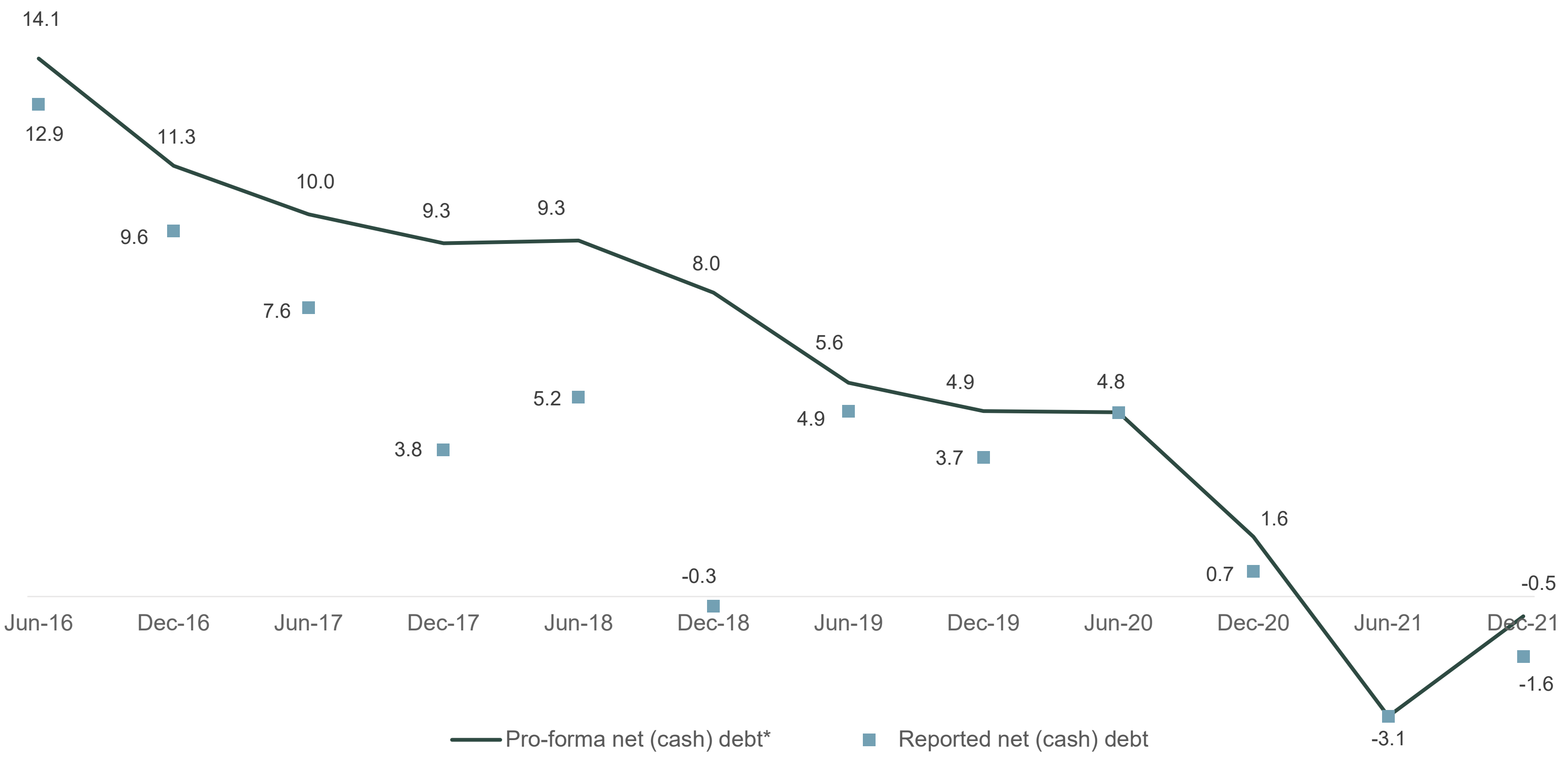
Queensland Alumina Limited boiler feed water heating project* (115ktpa CO_2 emissions reduction) seeks to install heat recovery equipment to reduce waste energy by 50% displacing 1.6 PJ pa of coal

Incentivise MACC projects with internal carbon price of $75/t CO_2 initially. Embedded in planning process and prioritised project pipeline

Open to partnerships and will be disciplined on financing and use of our balance sheet

Balance sheet is strong; we will maintain our discipline

Net (cash) debt
$bn



*Pro-forma net debt adjusts for the remainder of previously announced buy-backs from operations, lags in shareholder returns from disposal proceeds, Australian tax lag and disposal-related tax lag and the impact of IFRS 16 Leases accounting change for the prior periods. This lease accounting change is reflected in the June and December 2019 reported net (cash)/debt | ^LTM = Last Twelve Months

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

Gearing -3% and net (cash)/debt to LTM^ EBITDA of -0.04x

Operating cash flow of $25.3bn

Invested $7.4bn and distributed $15.4bn of cash to shareholders in 2021

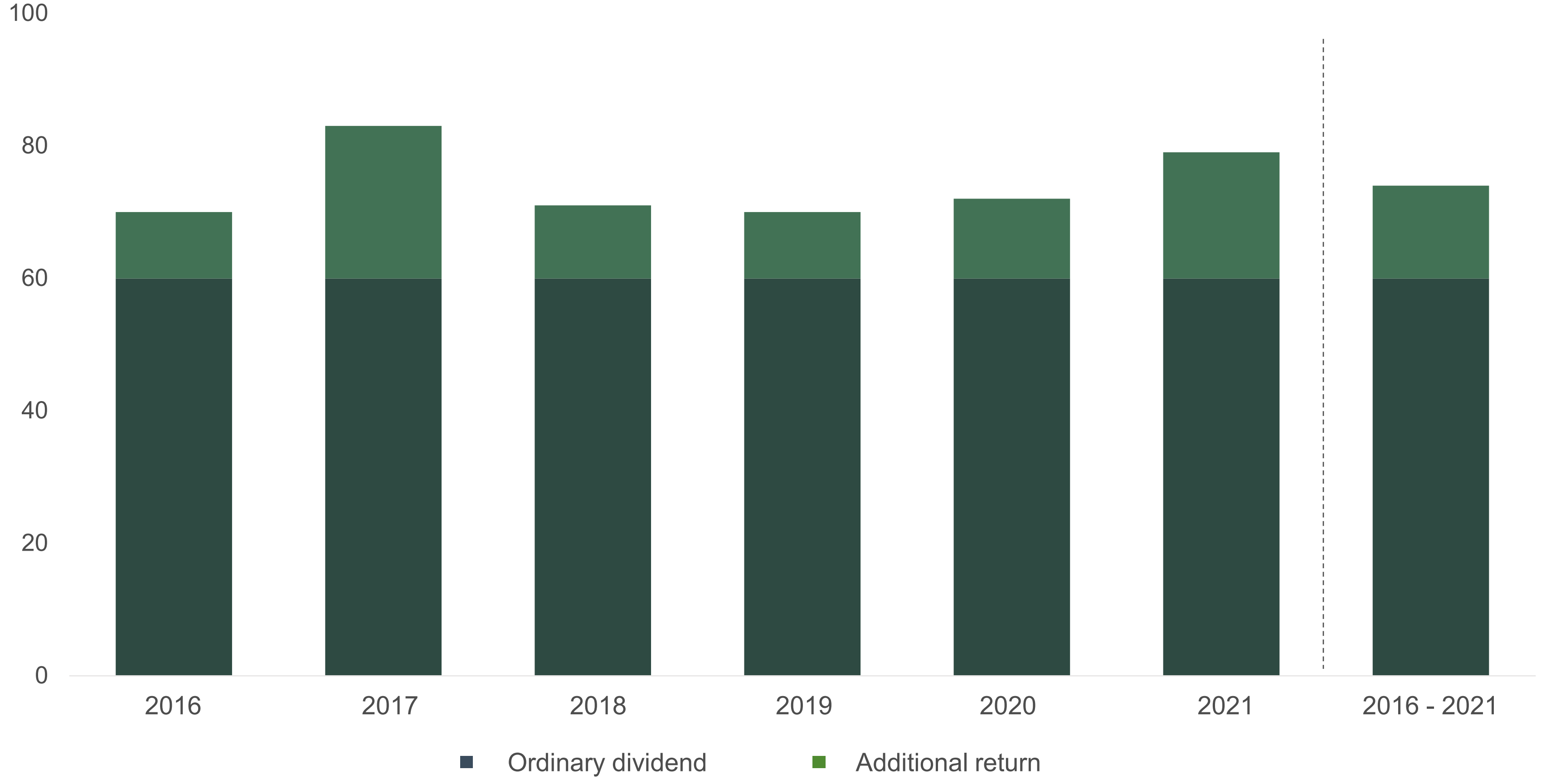
Our financial strength allows us to simultaneously:

- Reinvest for growth
- Accelerate our own decarbonisation
- Continue to pay attractive dividends in line with our policy

Attractive dividends remain paramount

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

Pay-out ratio (%)



Excluding divestment proceeds returned to shareholders

Consistent six-year track record of shareholder returns

2021 pay-out of 79% reflects exceptional financial results, strong balance sheet and disciplined ramp up of investment

$16.8bn total dividend declared including $12.8bn ordinary dividend

60% average pay-out on ***ordinary*** dividend over the past six years

74% average pay-out ***in total*** over the past six years


Jakob Stausholm
Chief Executive
Gobi Desert, Mongolia

Delivering a stronger Rio Tinto

Best operator

RTSPS*: 5 pilot sites initiated, already seeing returns. Significant step up in programme of work for 2022

Enhancing **operating and leadership capabilities**

Impeccable ESG credentials

ELYSIS™ successfully produced aluminium without any direct GHG emissions

New targets for our GHG emissions; -15% by 2025 and -50% by 2030

Climate partnerships with: InoBat, POSCO, BlueScope, RESOLVE, Carbfix

Excel in development

Oyu Tolgoi underground project: reset relationship with partners and commenced underground mining operations

Progressing replacement projects in Pilbara in adverse operating conditions

Rincon lithium acquisition for $825 million, expected to complete in Q2 2022

Social licence

Advanced discussions with Traditional Owners; 5 Groups in the Pilbara

Targeted investments in our Communities and Social Performance, ESG and climate teams

Established **Australian Advisory Group**

*Rio Tinto Safe Production System

Respect for people, communities and environment at our heart

– **Launched the Everyday Respect initiative and engaged an external expert** review on workplace culture. We are working to create safe, inclusive and respectful workplaces

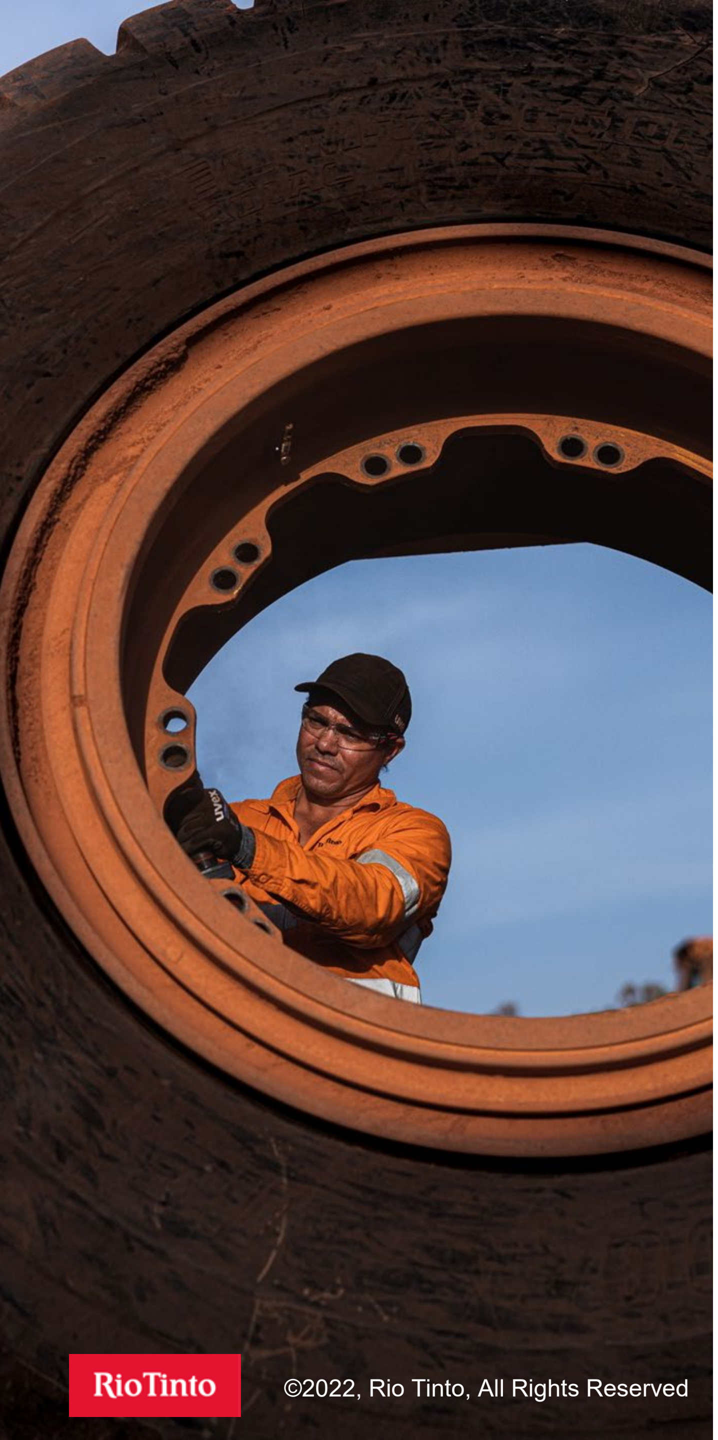
– **Acknowledging and modifying mindsets and behaviours:** Leadership Development Program, Safe Production System and Cultural awareness training (>22k trained in 2021)

– **>1,500 Indigenous employees and contractors** working across our Australian business: $50m investment over 5 years to attract, retain and grow Indigenous professionals

– **Harnessing Indigenous traditional and ecological knowledge at Resolution:** partnering with Western Apache Tribal elders to restore culturally important Emory Oak trees in Arizona. Tribal Monitor Programme provides direct input from impacted Native American Tribes

– **Constructive and considered relationship** with Puutu Kunti Kurrama and Pinikura (PKKP) leadership and Rio Tinto Iron Ore

– **Landmark co-management process:** Social, Cultural and Heritage Management Plan with Yinhawangka Aboriginal Corporation for the Greater Paraburdoo Iron Ore Hub Proposal



Building sustained operating improvement

Safety always our priority

Rio Tinto Safe Production System initiated at five pilot sites focusing on **sustainably unlocking capacity across the system and improving production rates**

We are **already seeing returns in the first year of rollout*** including a significant improvement at the Kennecott concentrator since the July deployment compared to the previous 12 months performance

---

A significantly larger programme is planned for 2022, subject to COVID-19 constraints, focused on highest-value deployments with the RTSPS rollout of up to 30 deployments at 15 sites as well as up to 80 rapid improvement (Kaizen) projects which aim at improving targeted bottlenecks

---

Examples of **initiatives in 2022** include: **Pilbara:** increasing plant throughput, reducing wait for feed at primary crushers, reduction in material handling losses. **Aluminium:** improved productivity at the smelter pots, improved flow rates, energy efficiency, optimised caustic consumption at refineries

*See Appendix for further details (slides 33-34)

Decarbonising our business and value chain*

Net zero by 2050 across our operations
Scope 1 and 2: 15% reduction by 2025, 50% by 2030
Scope 3: Engaging with iron ore and bauxite customers

Energy Development team established

- Deploying renewables at scale, securing tenure
- Working with key providers and using third parties for renewable power
- Disciplined on financing and use of our balance sheet

Partnering with suppliers and industry

- Purchased four electric locomotives from Wabtec for piloting in Pilbara
- MoU with CarbFix to use land in Iceland to develop terminal for CO_2 injection and mineralisation
- InoBat investment: supporting the development of a battery ecosystem in Europe

Developing technologies

- ELYSIS™ produced aluminium without any direct GHG emissions
- Low-carbon research project using microwave energy and sustainable biomass as a reductant
- Canada green hydrogen based DRI

Partnering with customers, technology companies, universities and alliances

- BF optimisation: Baowu, Nippon Steel, POSCO, BlueScope
- Pilbara green hydrogen based DRI and melter: BlueScope
- Tsinghua University and Australian Universities

*Refer to Appendix for details (slides 43-44)

DRI = Direct reduction iron, BF = Blast Furnace

Reframing our approach to growth

Exploration

- 18 countries across seven commodities
- Unlocking opportunities through technology
- Accelerating discovery, minimising footprint
- Partnering with others: KoBold Metals, Western Copper and Gold Corporation, Talon Metals

Replacement

Fe Pilbara: Gudai-Darri, Western Turner Syncline, Robe Valley, Western Range

Cu Kennecott south pushback

Al Kemano

Ti Zulti South

Growth – internal

Fe
- Pilbara: Gudai-Darri
- Canadian HBI
- Simandou

Cu
- Oyu Tolgoi underground
- Resolution, Winu
- Kennecott underground

Li Jadar

Al AP60

Growth - external

- Binding agreement to acquire the Rincon lithium project in Argentina. Studies will continue throughout 2022
- Increased ownership to 100% at Diavik Diamond Mine

Oyu Tolgoi Underground

Best operator | Impeccable ESG credentials | **Excel in development**

Social licence

Resetting the relationship between partners and increasing the value the project delivers for Mongolia

- **Underground mining commenced** on 25 Jan 2022 following comprehensive agreement reached with all partners. Sustainable production expected in H1 2023
- **Capital forecast $6.9bn** including $175m of known COVID-19 impacts to the end of 2021*
- **Funding plan agreed and long-term power** secured via Electricity Supply Agreement. Working with the Government to support long-term renewable energy generation
- **One of the largest block cave mines.** Globally competitive safety performance; highest water use efficiency per tonne, >90% average water recycling rate

*These estimates exclude any impacts of delays to work schedules caused by restricted approved budgets since the start of 2021. This impact, and the impact of any ongoing COVID-19 impacts will be assessed following the commencement of underground operations with further updates provided to the market in due course. Panels 1 and 2 studies will be ongoing throughout 2022. Further study work is also underway to assess the extraction methodology and ultimate recovery of the Panel 0 recoverable pillars.

Strong foundation for growth, decarbonisation and shareholder returns

Clear strategy

- Accelerate our own decarbonisation
- Grow in materials enabling the global energy transition
- Develop products and services that help our customers to decarbonise
- Continue to deliver attractive shareholder returns

Significant achievements in 2021

- New strategy
- Ambitious emissions targets
- Record financials and dividends
- Maintained financial strength
- Commenced underground operations at Oyu Tolgoi
- Binding agreement for Rincon lithium
- Visible shift in attitudes and behaviours
- Established partnerships with customers for blast furnace optimisation and green hydrogen based DRI and melter in the Pilbara

Continued progress in 2022

- Further evolving our culture
- Build operating excellence: rollout RTSPS at 15 sites
- Further advance Oyu Tolgoi
- Complete Pilbara replacement projects
- Develop growth options, complete Rincon transaction, explore options for Jadar
- Implement decarbonisation projects
- Continue to engage with Traditional Owner Groups and modernise agreements in the Pilbara

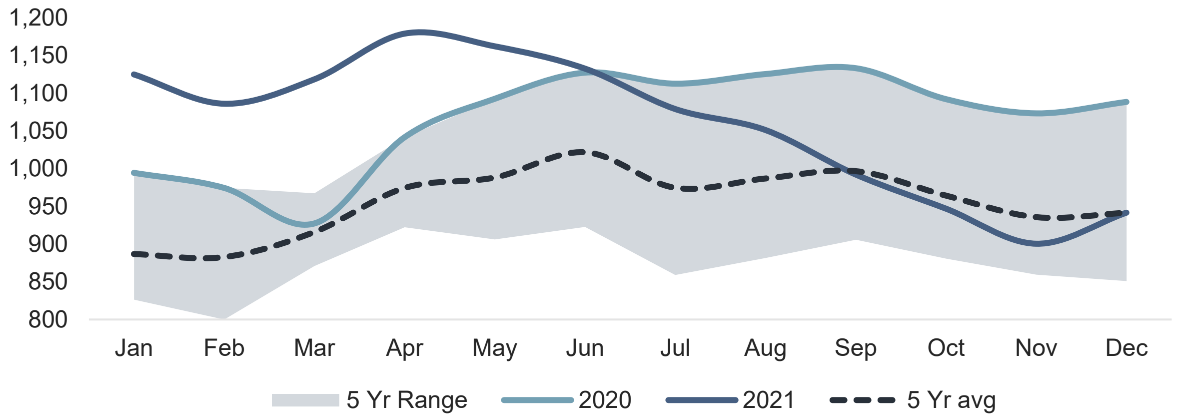
Best operator	Impeccable ESG credentials	Excel in Development	Strengthening our social licence

Appendices

Winu, Western Australia

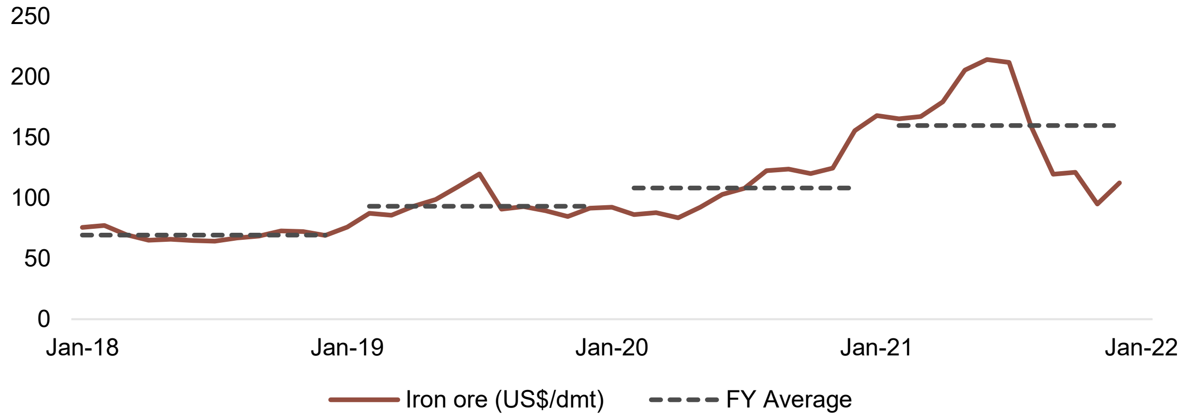
Strong iron ore demand and tight supply despite H2 slowdown in China

China's crude steel production (Mt annualised)

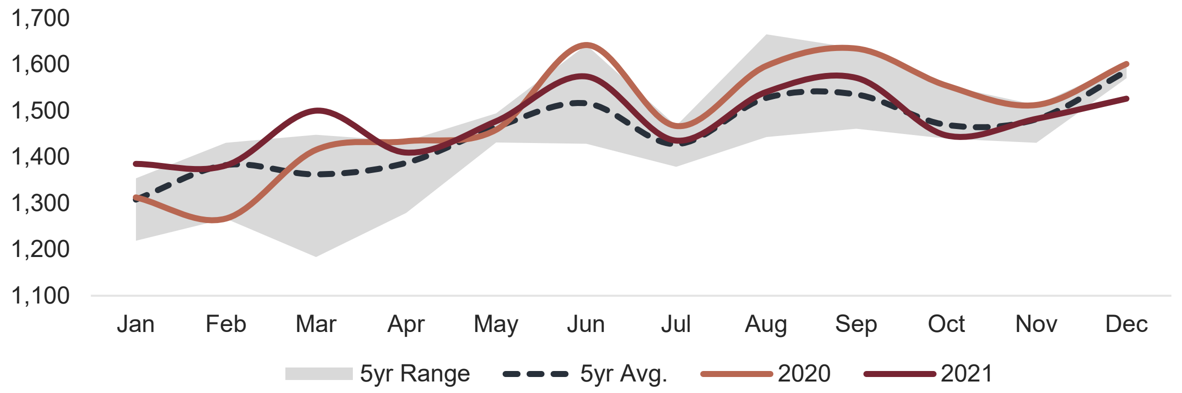


Iron Ore[1] (+48% YoY)

$/dmt



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

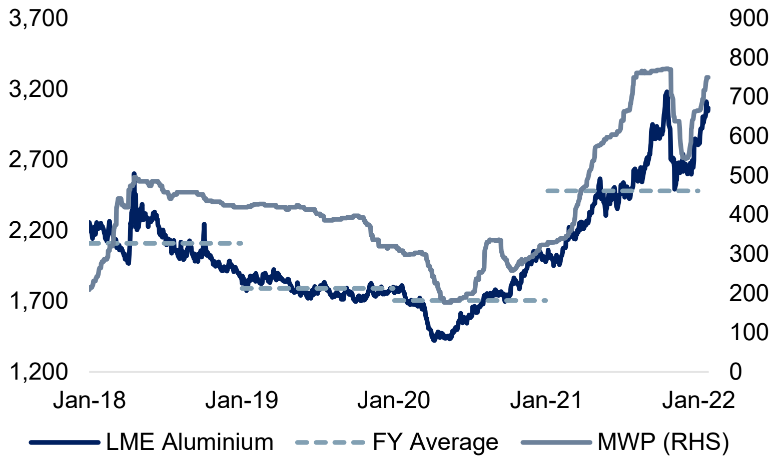


- Despite weaker demand and mill operating restrictions during H2, China's FY21 crude steel production exceeded 1Bnt for the second time in history. Demand recovery in the rest of world maintained its momentum
- Combined shipments of the major low-cost producers remained below FY18 volumes for the third consecutive year
- Less high-cost supply was needed to balance the market during H2 21, while prices declined 25% half on half

[1] Monthly average Platts (CFR) index for 62% iron fines | [2] Total seaborne suppliers annualised, reported at 100%. Sources: Rio Tinto, NBS, Kpler | YoY = change in annual average price

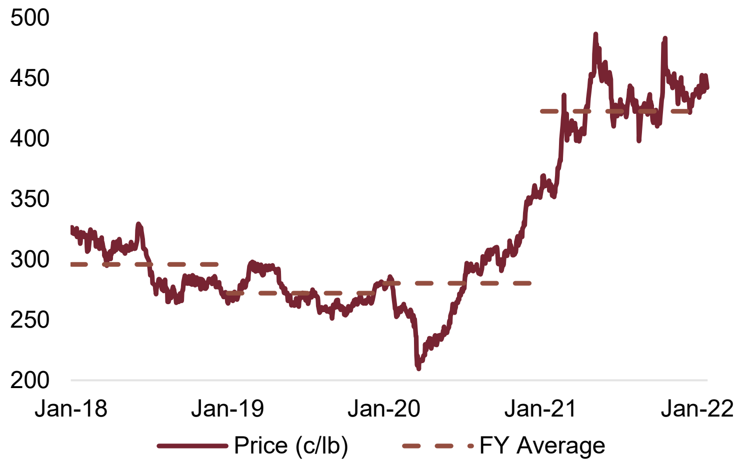
Robust demand supports aluminium, copper and TiO_2

Aluminium[1] (+46% YoY)



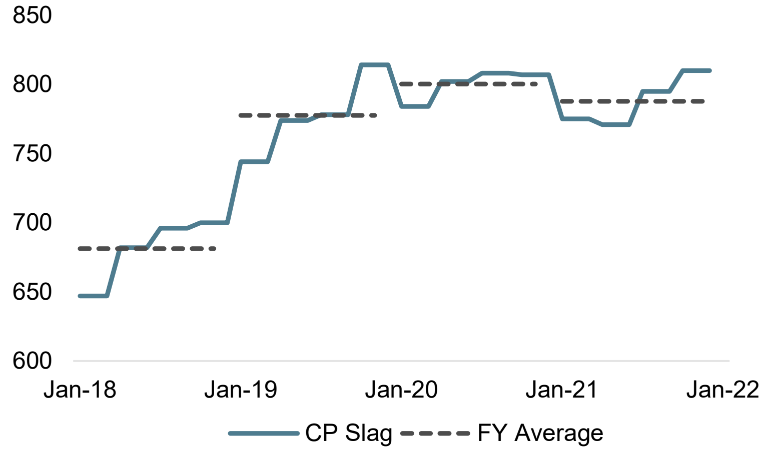
- Strong global demand recovery led by packaging, transport and building and construction
- Increase in global deficit on extensive power related smelter curtailments in China and Europe
- Lower global inventories supportive of high market and product premiums

Copper[2] (+50% YoY)



- Exchange inventories declined to multi-year lows
- Demand grew strongly through 2021 with a pick-up in the rest of the world in H2
- Mine supply returned to growth, but many regions continued to face headwinds from lingering effects of COVID-19, workforce constraints and adverse weather conditions

TiO_2 (chloride slag) (-2% YoY)

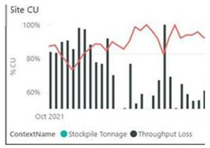


- Strong end use TiO_2 demand and rising pigment prices supporting feedstock demand
- Supply chains remain tight, encouraging positive purchasing sentiment
- Tight high-grade supply amplified by production disruptions and project delays

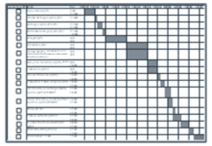
[1] Average LME price. MWP = Mid-West premium | [2] Average LME price | YoY = change in annual average price. Sources: Rio Tinto

Already seeing returns from 2021 deployments; focus on highest-value in 2022

Kennecott Concentrator

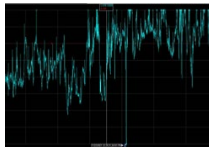


Flow
Addressing bottlenecks
20+ people upskilled

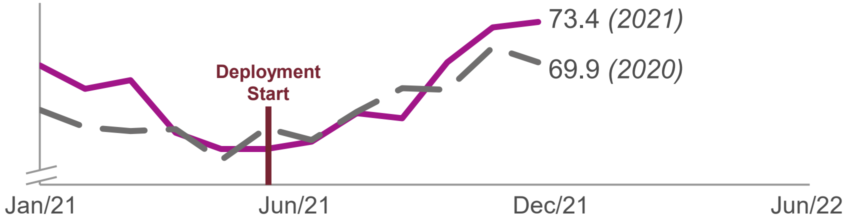


Shutdown management
Efficiently executing longer periods of downtime
20+ people upskilled

Clean and inspect
Maintaining clean and safe work environments
150+ people upskilled

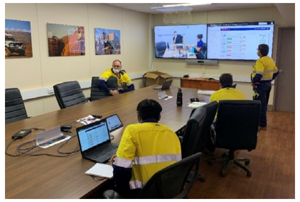


Centrelines
Running equipment at base condition
20+ people upskilled

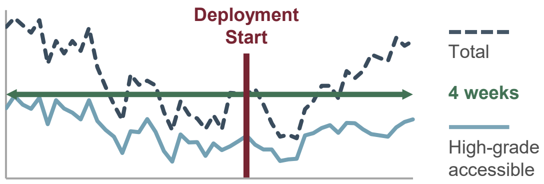


Asset Utilisation Ratio – Processing (%)
(6 month average)

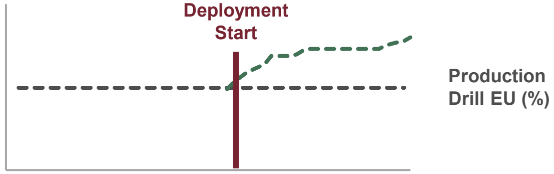
West Angelas Drill and Blast



Pulse Survey | Feedback
Increase in team member sentiment towards "supportive leadership" and "becoming best operator"



Broken stock levels
High grade accessible flattening at ~2.7 weeks, with overall stocks increasing to ~6 weeks



Production drill effective utilisation
Increase of 12% from baseline period

Kaizens delivering immediate value

Pilbara iron ore 2021 complete

Cape Lambert - Conveyors

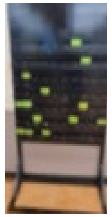
- ‘Super Kaizen’ with 30 participants comprising representatives from Cape Lambert, Tom Price, Integrated Operations and Contractors
- Reduce pain points for operational and maintenance personnel in spillage and conveyor hygiene
- 206 ideas, 30 actions completed, 18 actions in progress

West Angelas

- To improve ‘clean up’ delays and rework that contributes significantly to drill standby losses
- Wait pattern reduced by ~15%
- 100 ideas and 11 quick wins completed
- Mine scorecard embedded in Leadership meetings

Yandi - Conveyors

- Cleaning of excessive material on conveyor undersides and build-up in key chutes, along with implementation of regular launder cleaning
- New yellow maintenance roller tags replicated in an app seamless digital integration
- 15% reduction in chronic events in first few months



Brockman 4 – Wait for Trucks (WFT)

- Demonstrated a reduction in WFT by 25% at Brockman 4
- Completed initiatives estimated at 350kt to 700kt increase of feed to crusher

Used a visual of the ‘winning shift’ to get from here to here

12 initiatives converted to scope of work

Q1 2022 Kaizens: Rail Brake Cars | Tom Price Pit to Plant | Yandi Screen Materials | Marandoo Dewatering | Drill and Blast Competency

Sustainability highlights

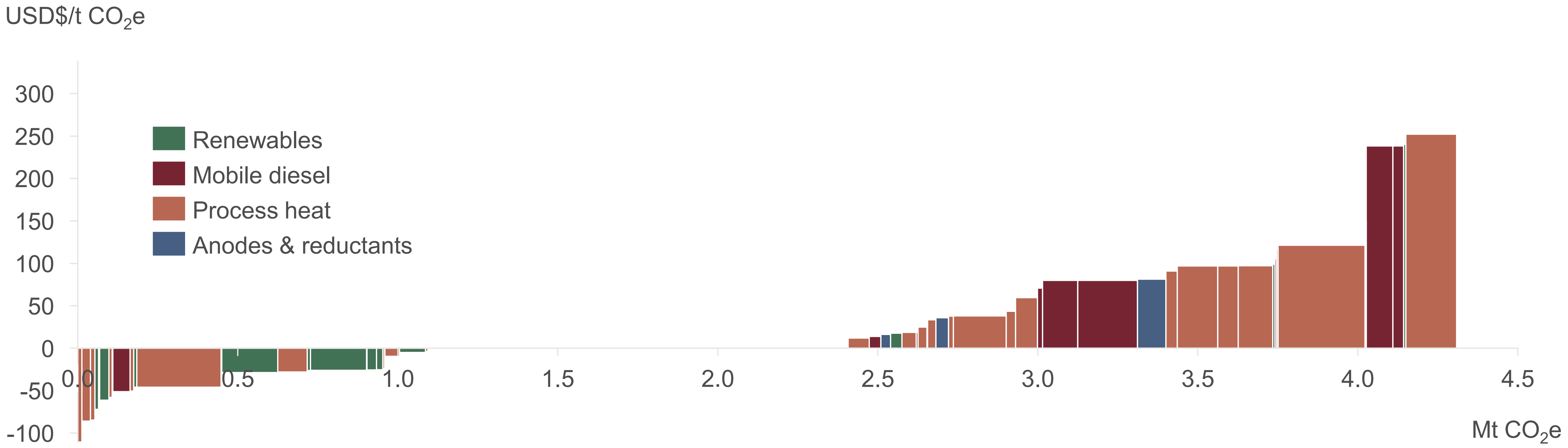
	2021 performance	Goals

People
Safety
Diversity
	- Zero fatalities at managed operations
	- All injury frequency rate (AIFR) at 0.40 (target: 0.33)
	- 25% of our Executive Committee were women, up 2% from 2020
	- 21.6% of our workforce were women, up 1.5% from 2020[1]
	- 36.4% of Board roles were held by women, up 3.1% from 2020
		- To maintain zero fatalities, and to eliminate workplace injuries and catastrophic events
		- To improve diversity in our business by:
		  - Increasing women in the business (including senior leadership) by 2% each year;
		  - Aiming for 50% women in our graduate intake, and 30% from places where we are developing new businesses

Social Community	- 95% (20 out of 21 asset groupings) have met their 2021 repeat complaints target - 90% (19 out of 21 asset groupings) have met their 2021 significant complaints target - 81% (17 out of 21 asset groupings) have met their 2021 locally set procurement target - 53% (10 out of 19 asset groupings) have met their 2021 local employment target	- To demonstrate local economic benefits from employment and procurement of goods and services by reporting yearly against a locally defined target - To capture and manage community complaints effectively and reduce repeat and significant complaints each year. - These targets will be updated for 2022-2026.
Climate	- The 2021 Scope 1 and 2 emissions were 31.1Mt CO2e – a reduction of 1.4Mt CO2e (4.3%) relative to our 2018 baseline	- Scope 1 and 2 targets were updated on 20 October 2021. Our new targets are: to reduce our absolute Scope 1 and 2 emissions by 15% by 2025 and by 50% by 2030 - Scope 3: We will engage with our direct customers, representing 75% of our iron ore scope 3. We will engage with all our bauxite customers to seek collaboration in alumina refining decarbonisation projects
Environment Water	- The water stewardship targets have progressed well with the Group target, and 4 of the 6 asset-level targets remaining on track. Kennecott and Ranger site-based targets are at risk, but both are considered recoverable with additional focus	- To disclose for all managed operations by 2023 their permitted surface water allocation volumes, annual allocation usage, and the estimated surface water allocation catchment runoff from average annual rainfall - To achieve local water stewardship targets for selected sites by 2023

Accelerating current abatement projects

Our Marginal Abatement Cost Curve for Scope 1 & 2 emissions
(excl. Pilbara and Pacific Operations repowering, ELYSIS™, energy efficiency and carbon offsets)



As of 30 September 2021

MACC project*: Queensland Alumina Limited (QAL) boiler feed water heating

Project summary:

Boiler feed water heating project seeks to install heat recovery equipment to reduce waste energy by 50% displacing 1.6 PJ/pa of coal.

Business case overview:

First abatement	**2024**
Abatement (2025)	**115ktpa** CO_2e
MACC (US$/t$CO_2$)*	**<$0/t CO_2e**

Details:

QAL operates three parallel high temperature digestion units, using ~25 PJ/pa of coal as boiler fuel. 12% of boiler steam is utilised for boiler feed water heating

Approximately 50% of this waste steam can be captured by boiler feed water reducing the steam required for heating by ~50%

*Marginal Abatement Cost Curve for Scope 1 & 2 emissions. Under assessment through the planning process. The project has a positive NPV at a carbon price of zero

MACC project*:
Rio Tinto Fer et Titane energy efficiency

Project summary:

Decrease natural gas and reductant consumption by various energy efficiency initiatives

Business case overview:

First abatement	**2021**
Abatement (2025)	**>32ktpa CO_2e**
MACC (US$/t$CO_2$)	**<$0/t CO_2e**

Details:

- Optimising operation parameters with lean indicators and new instrumentation to improve the process for rotary kiln at the Ore Preparation Plant
- Increase valorisation of the CO gas produced on site (by-product of the ilmenite smelting process) to displace natural gas at the Up-Graded Slag plant's boilers
- More energy efficiency projects on the way to deliver more abatement in the coming years

*Marginal Abatement Cost Curve for Scope 1 & 2 emissions Under assessment through the planning process. The project has a positive NPV at a carbon price of zero

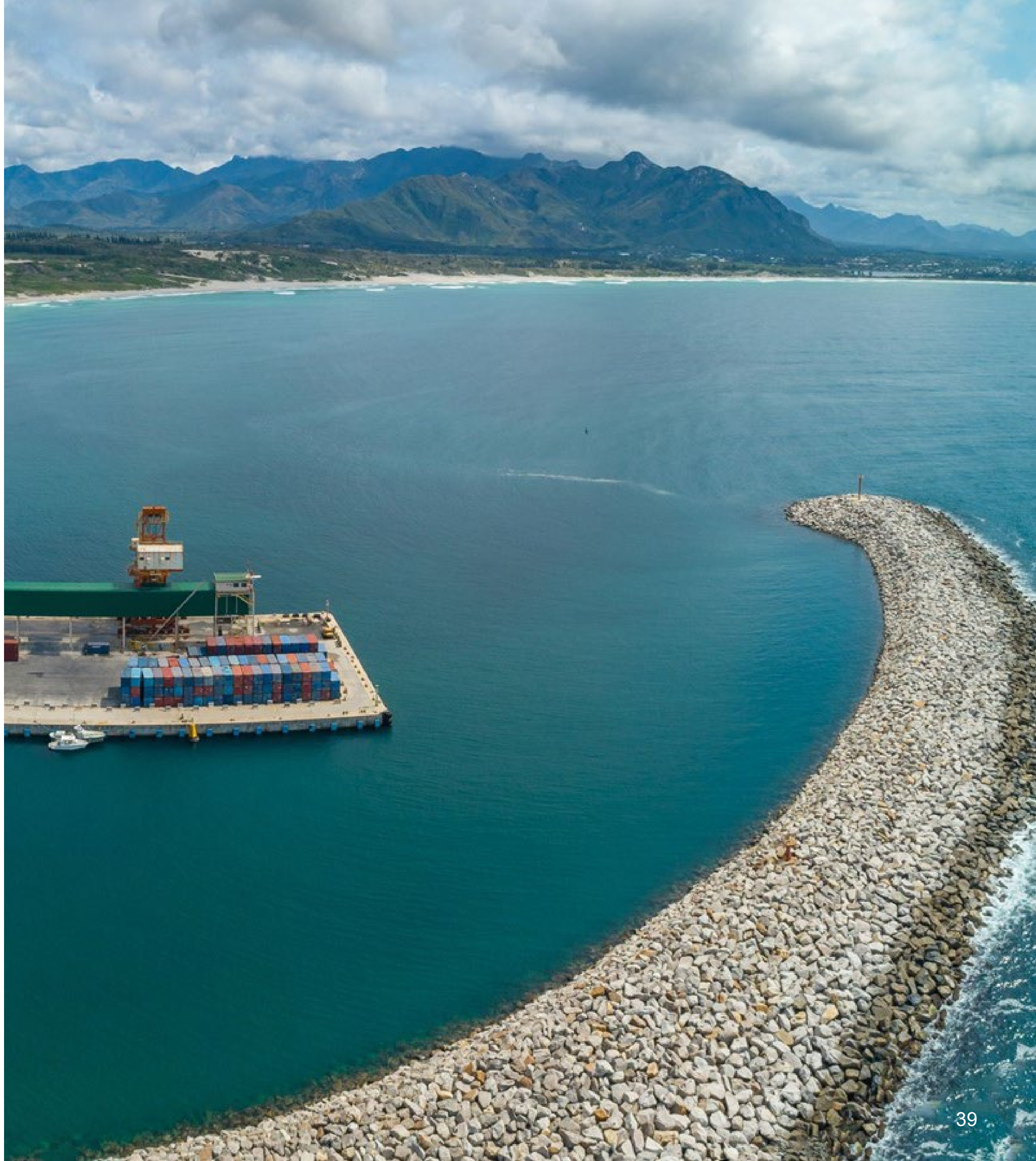
QMM construction on solar and wind power plant commenced

QMM has signed a 20-year power purchase agreement using renewable energy with CrossBoundary Energy to supply their mine operations in southern Madagascar

~18,000 solar panels and four wind turbines will enable QMM to meet all of its electricity needs during peak periods and up to 60% of its annual electricity consumption, as well as to reduce its annual carbon dioxide emissions by more than 26kt

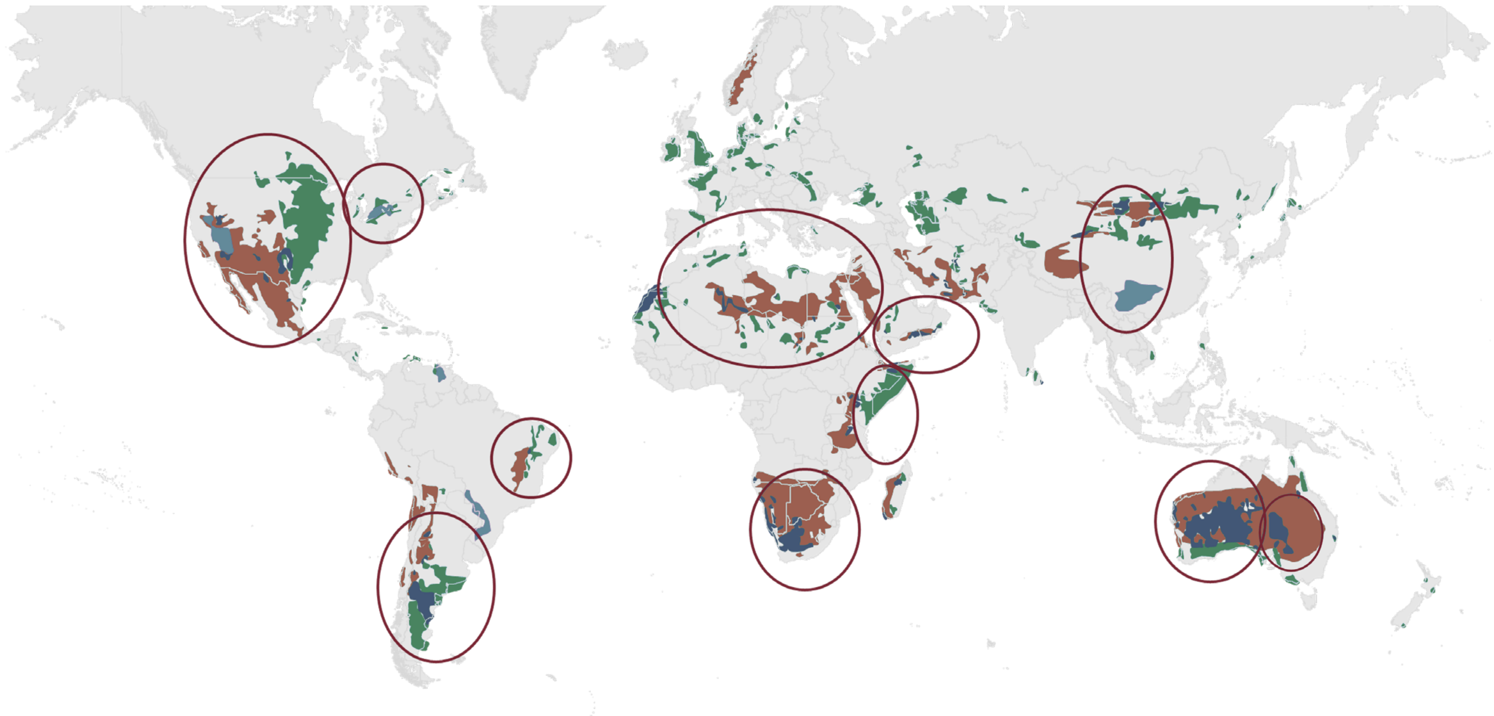
The renewable power supply will reduce QMM's heavy fuel oil purchases by up to 8.5kt per year

The first unit, an 8 MW solar energy facility, will be operational in 2022. The 12 MW wind power facility will be completed in 2023



We operate in three out of the eleven advantageous regions for renewable energy

■ Ideal for wind ■ Ideal for solar ■ Ideal for solar and wind ■ Existing major hydropower ○ RES* endowed region



*RES = Renewable Energy System

Advantaged positions

Large power producer and consumer. Uniquely positioned in advantaged green energy locations – Pilbara, Quebec and Queensland

Assets and people

Long-life orebodies with superior orebody knowledge. Talented workforce

Technology

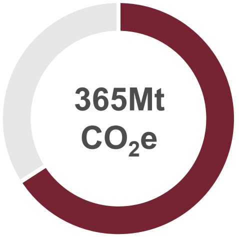
Metallurgy, geology, mining equipment, processing, energy

Cash flow and balance sheet

Disciplined capital allocation. Cash flow through cycle. Ability to invest and pay an attractive dividend – in line with our policy

Our products enable the energy transition and we need to be part of net zero value chains

Iron ore



Customer partnerships

- Baowu / Tsinghua (2019)
- Nippon Steel (2020)
- POSCO (2021)
- BlueScope (2021)

Technology partnerships and investments

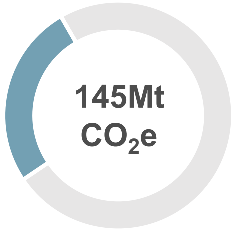
Blast furnace optimisation	Pilbara beneficiation	Low-carbon research project
H_2 DRI and melter	H_2 DRI Canada	Simandou

2022 customer engagements

28% of our customers have public targets and net zero ambition;

We will engage with our direct customers, representing 75% of our iron ore scope 3

Aluminium



ELYSIS™

On track for zero emission technology to be available for installation from 2024

Limited influence on power-related emissions

74% of our downstream aluminium value chain Scope 3 emissions are from our customers (and customer's customers) use of electricity, predominantly in China

2022 customer engagements

We will engage with all our bauxite customers to seek collaboration in alumina refining decarbonisation projects

Shipping

Net zero by 2050

from shipping of our products

Net zero vessels in our portfolio by 2030

40% intensity reduction by 2025

five years ahead of IMO deadline

1
Improving existing vessels efficiency

2
Increasing use of transition fuels (LNG and biofuels)

3
Partnering for development of net zero fuels (green ammonia)

Partnering to reduce the carbon footprint of our value chains

95% of Scope 3 emissions is from the processing of iron ore, bauxite and other products by our customers

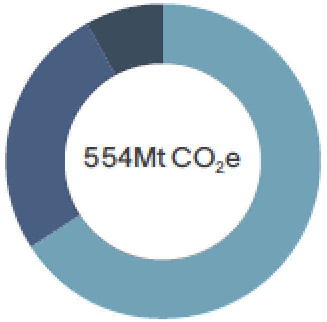
94% of these processing emissions take place at our customer facilities in China, South Korea, Japan and other countries that have pledged to be carbon neutral by around mid-century

About 28% of our iron sales are directly to steel producers that have already set public targets for their Scope 1 and 2 emissions (our Scope 3), and have ambitions to reach net zero by around mid-century

In 2022, we commit to engage with all our direct iron ore customers, representing approximately 75% of our iron ore sales and related Scope 3 emissions

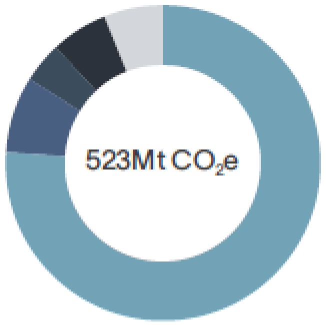
2021 Scope 3 emissions by category (equity basis)

	Mt CO_2e
Processing of iron ore	364.6
Processing of bauxite and alumina	144.5
Purchased goods	16.3
Capital goods	1.9
Fuel-related activities	2.9
Upstream and intercompany transportation	5.9
Downstream transportation	2.7
Processing of salt	7.2
Processing of TiO_2 feedstocks	4.9
Processing of copper concentrate	0.5
Processing other sold products	1.6
Travel, commuting and waste	0.5



2021 Scope 3 emissions from product processing by country

	Mt CO_2e
China	399.0
Japan	41.3
South Korea	20.8
Other countries with net zero pledges	30.6
Other countries without net zero pledges	31.6

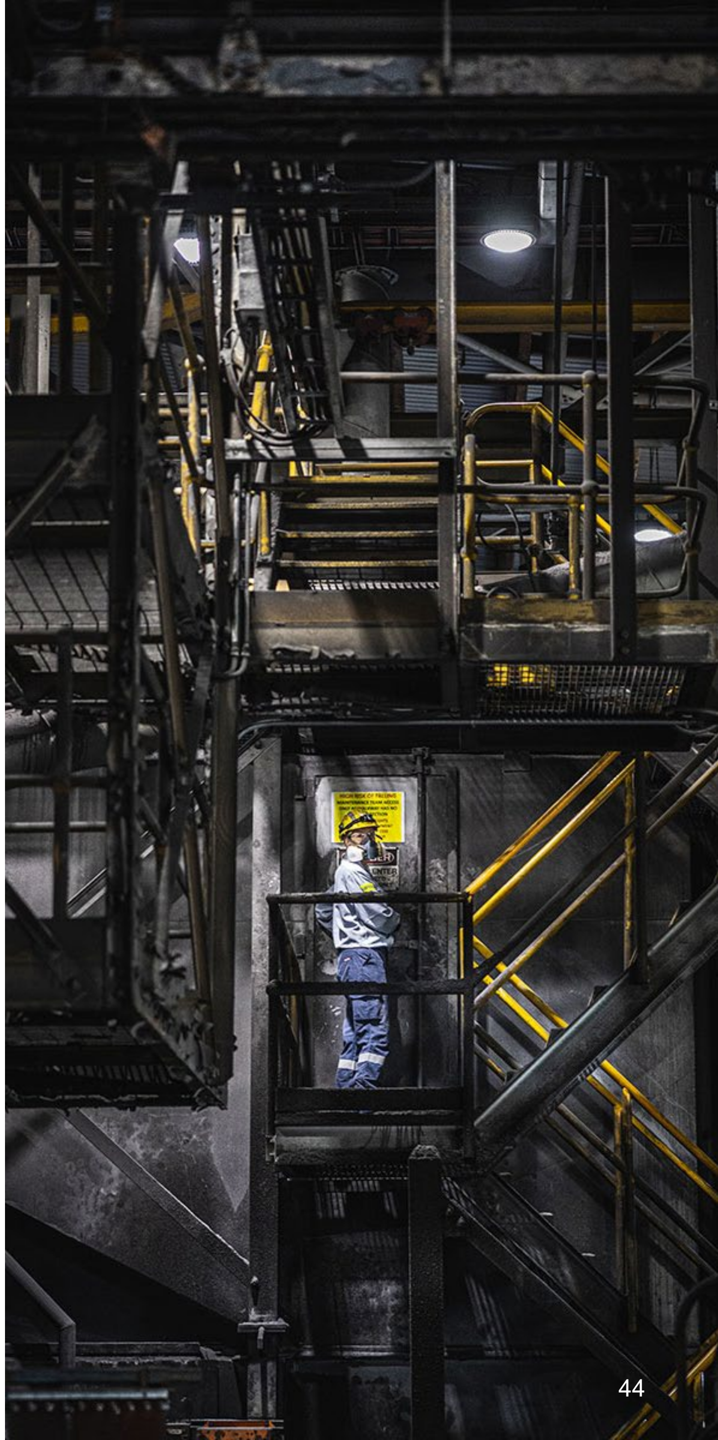


Climate and value chain: H1 2021 highlights

- **Signed a charter agreement with Singapore's ship management company** Eastern Pacific Shipping for three liquefied natural gas dual-fuel Newcastlemax bulk carriers, to further reduce our scope 3 shipping emissions.
- **Charge On Innovation Challenge**, along with other Founding Patrons: BHP and Vale, and in partnership with Australia's Mining Equipment, Technology and Services (METS) industry body Austmine.
- **Partnership with the Australian Renewable Energy Agency (ARENA)** to study whether hydrogen can replace natural gas in alumina refineries to reduce emissions.
- **MoU with Schneider Electric** to develop a circular and sustainable market ecosystem for both companies and their customers.
- **MoU with POSCO,** the largest steel producer in South Korea and one of the world's leading steel producers, to jointly explore, develop and demonstrate technologies to transition to a low-carbon emission steel value chain.
- **MoU with InoBat,** a European battery technology and manufacturing company, to work together to accelerate the establishment of a "cradle to cradle" battery manufacturing and recycling value chain in Serbia.
- **Joined Japan's Green Value Chain Platform Network** (GVC Network), a collaboration established by the Japanese Ministry of the Environment to lead transparent decarbonisation efforts in the country.

Climate and value chain: H2 2021 highlights

- **Carbfix partnership**: to implement a technology for capturing carbon and permanently storing it underground at our ISAL aluminium smelter in Iceland.
- **Department of Energy awarded $2.2m of funding** to a Rio Tinto-led team to explore carbon storage potential at the Tamarack nickel joint venture in central Minnesota.
- **MoU with BlueScope** to research and design low emissions processes for the steel value chain, including iron ore processing, iron and steelmaking and related technologies.
- **ELYSIS successfully produced aluminium without any direct greenhouse emissions** at its Industrial Research and Development Center in Saguenay, Canada.
- **Investment in Inobat Auto, a** European-based battery technology and manufacturing company. This investment will support the completion of InoBat's research and development centre and pilot battery line.
- Launched the **construction of the solar and wind power plant at QMM** ilmenite mine operations in Fort Dauphin, in southern Madagascar.
- **Purchased four battery-electric trains** for use in the Pilbara, WA. Production is due to commence in 2023 ahead of initial trials in the Pilbara in early 2024.
- **Partnership with Komatsu** to fast-track the development and implementation of zero-emission mining haulage solutions, including haul trucks.
- **MoU with Caterpillar** for the development of their zero-emissions autonomous haul trucks for use at one of our Western Australian mining operations.
- **Partnership with Sumitomo** to study the construction of a hydrogen pilot plant at our Yarwun alumina refinery in Gladstone, Queensland, and to explore the potential use of hydrogen at the refinery.
- **Developed a new low-carbon steel process** that aims to replace coking coal with sustainable plant biomass when converting iron ore fines into steel.
- **Approval of a new solar farm and battery storage at Weipa QLD**, that will more than triple the local electricity network's solar generation capacity.



Our focus areas for iron and steel decarbonisation

Future pathways for Pilbara iron ore (2–4)

1	2	3	4	5	6
Blast furnace optimisation	**Pilbara beneficiation**	**Low-carbon research project**	**H_2 DRI and melter**	**H_2 DRI Canada**	**Simandou**
Multiple projects	Universities	Pilbara pathway 1	Pilbara pathway 2	Project – study phase	High-quality iron ore

Customer partnerships

We have a dedicated steel decarbonisation team

ELYSIS™ zero carbon metal meets new market demand

LOW CARBON FOOTPRINT PRODUCTS: AN IRREVERSIBLE TREND

Aluminium has always been the leading choice for sustainable product development due to its light-weight, strength and infinite recyclability. This technology takes the miracle metal's **sustainable advantage to a new level**. ELYSIS™ technology will allow the production of widely used products with less impact on our environment.

WORLD-CLASS PARTNERSHIP

ELYSIS

Alcoa

RioTinto

Québec

Canada

CARBON-FREE SMELTING. LOWER OPERATING COST. HIGHER PRODUCTIVITY.

THE BENEFITS OF THE TECHNOLOGY ARE NUMEROUS :

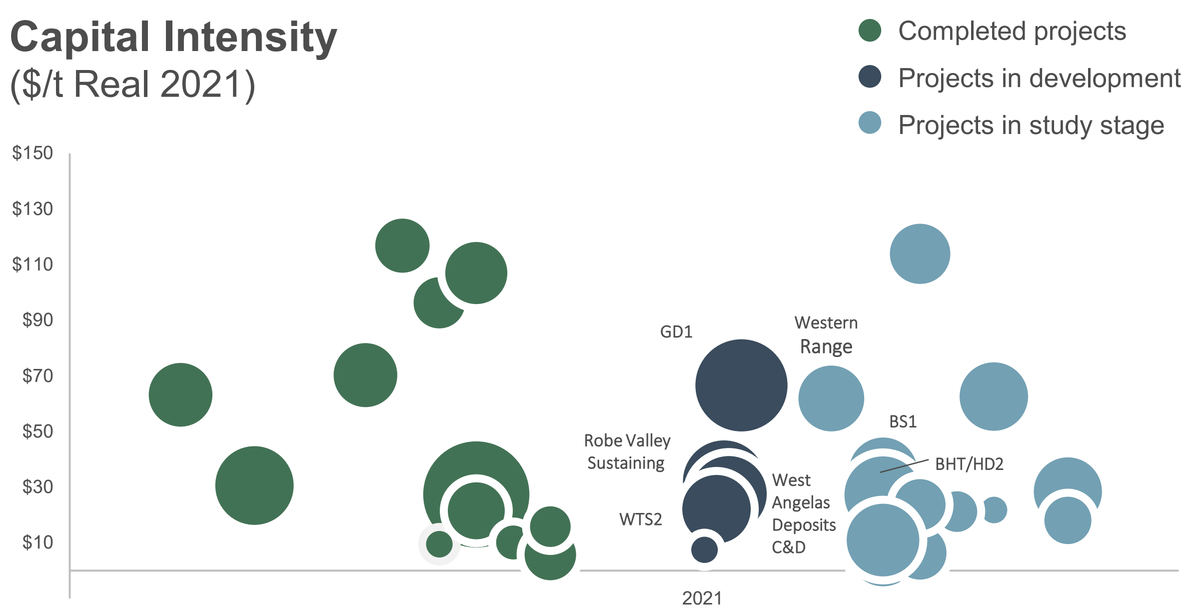
- Completely **eliminates direct greenhouse gas emissions** and **other by-products** in the aluminium smelting process.
- Potential to reduce GHG emissions in Canada by approximately 7 million metric tons. This would represent close to **20% of both Quebec and British Columbia's total industrial emissions.**
- Will allow the **production of greener products**: smartphones, cars, planes, construction supplies, etc.
- **Reduces operating costs** through the reduction of anode consumption.
- Increases the **productivity of aluminium smelters.**

Strong market demand emerging

- **Q3 2020:** Apple's 16" MacBook Pro is world's first device manufactured using ELYSIS metal, delivered through Rio Tinto's commercial network.
- **Q4 2020:** Rio Tinto supplied ELYSIS metal to AB InBev as part of partnership to produce their most sustainable can – piloted with Michelob ULTRA
- **Q2 2021:** Selected our Alma smelter in Saguenay-Lac-Saint-Jean, Quebec, for the first installation and demonstration of its inert anode technology at a commercial size of 450 kiloamperes (kA) and start of construction of the first prototype cells.
- **Q4 2021:** Successfully produced aluminium without any direct greenhouse emissions at its Industrial Research and Development Center in Saguenay, Canada

Mine project pipeline

Capital Intensity
($/t Real 2021)

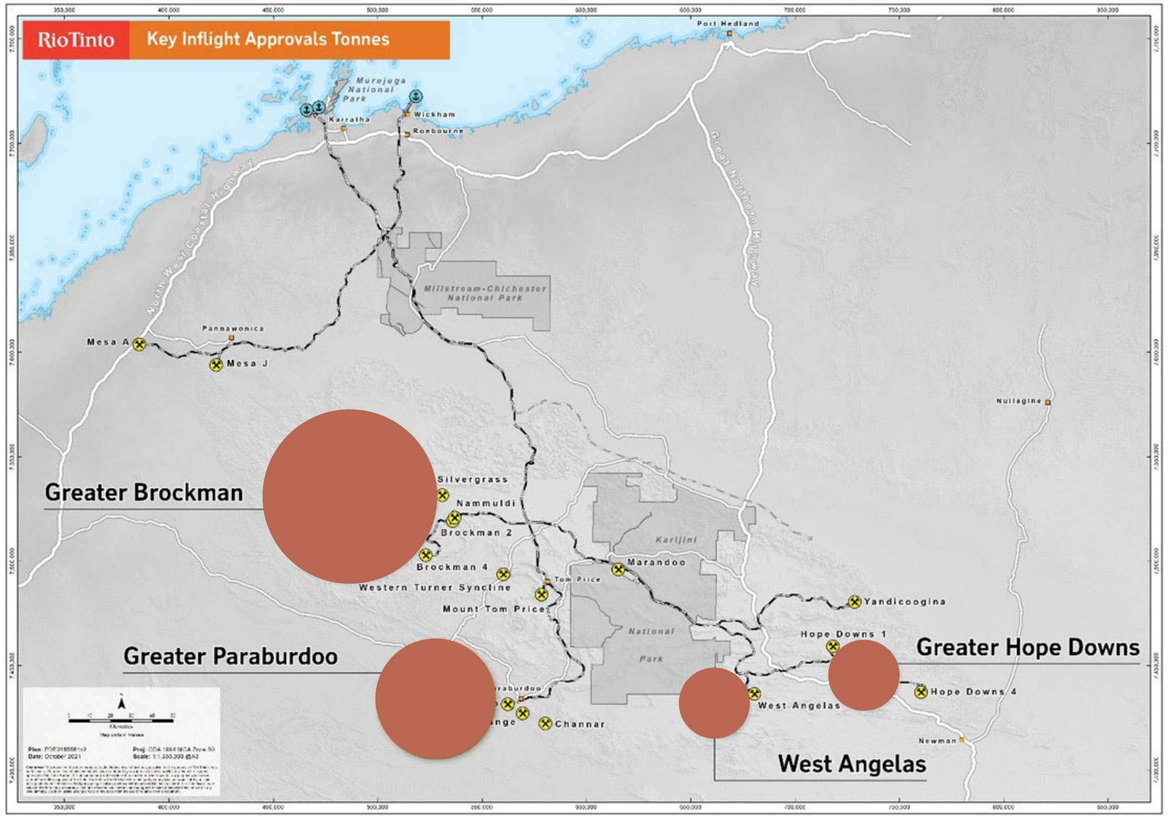


Studies being progressed. Commissioning from 2025:

- Western Range
- Bedded Hill Top and Hope Downs 2
- Brockman Syncline 1

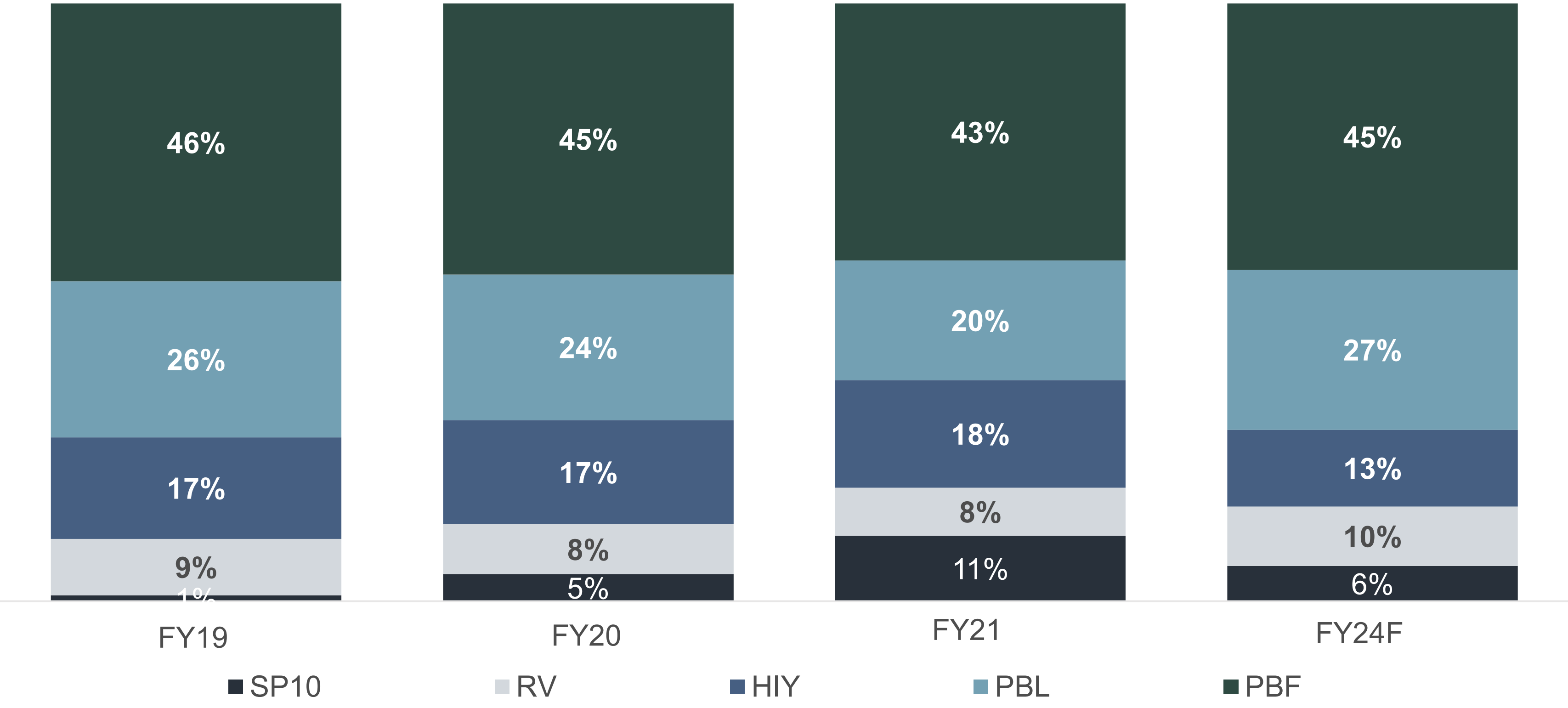
Approvals timeline risk has increased

High volume of environmental approvals for new mines



Ongoing focus on quality and product mix

Shipments by product
(%)



RV = Robe Valley, PBL: Pilbara Blend Lump, PBF: Pilbara Blend Fines

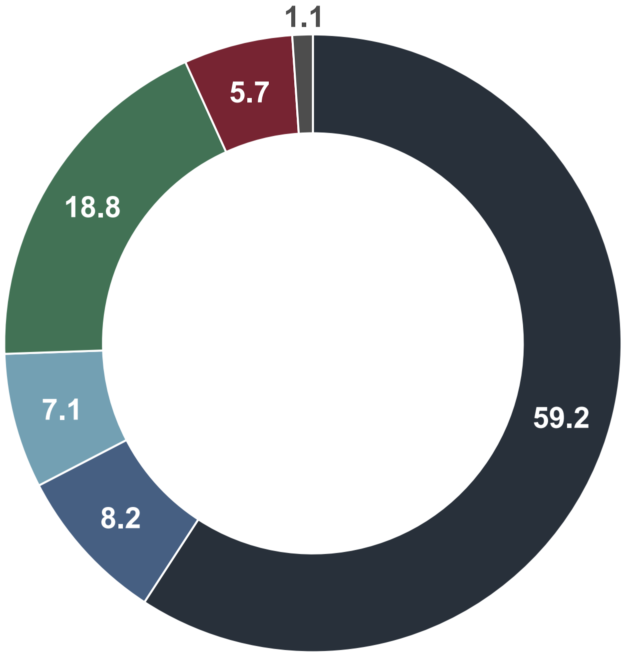
Consistent quality remains key for our Pilbara Blend. Demand remains strong, and will continue to underpin our product strategy

Pilbara Blend quality maintained by:

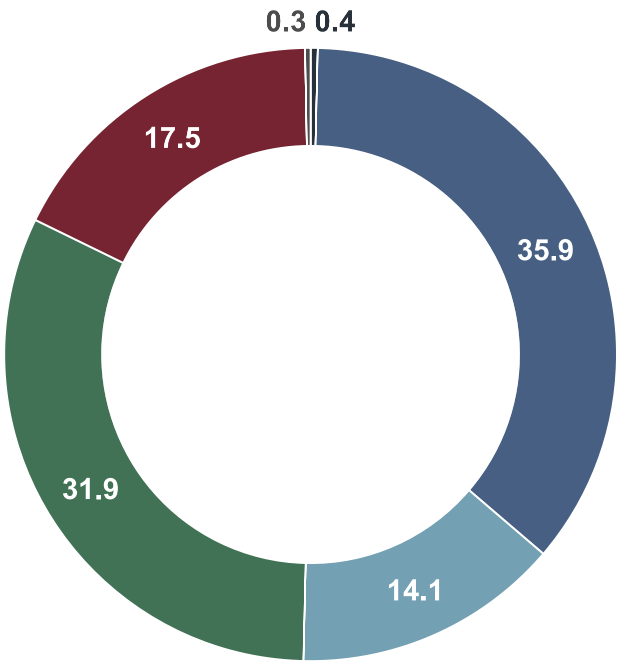
- Blending different ore sources to tight specifications
- Producing lower quality products (including SP-10) as required

Shareholder structure

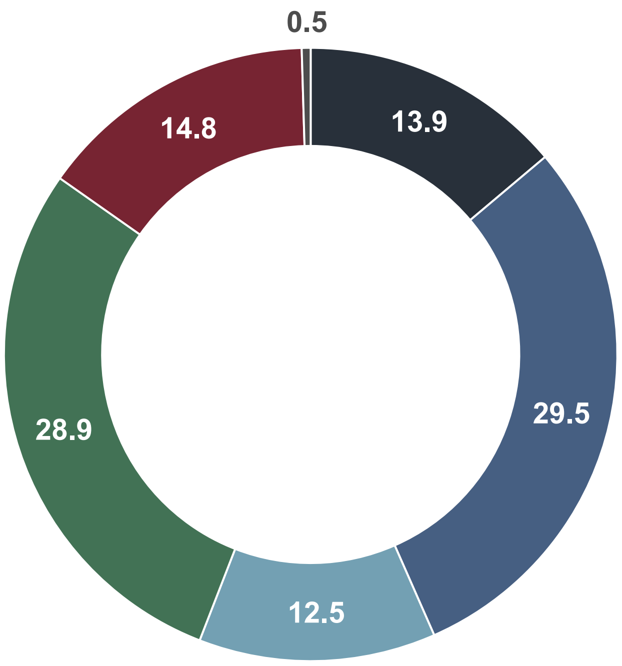
23% Rio Tinto Limited
Shares outstanding: 0.371bn



77% Rio Tinto plc
Shares outstanding: 1.247bn



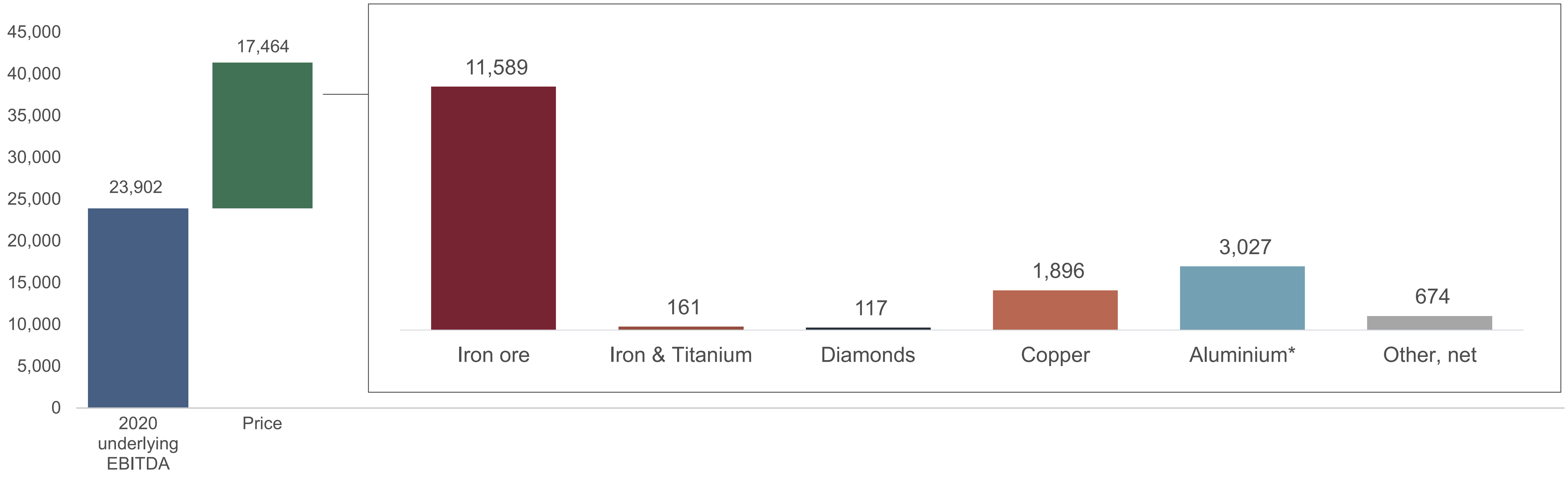
100% Rio Tinto DLC
Shares outstanding: 1.619bn



Australia UK Europe (ex UK) North America Asia ROW

Strong commodity pricing driving EBITDA

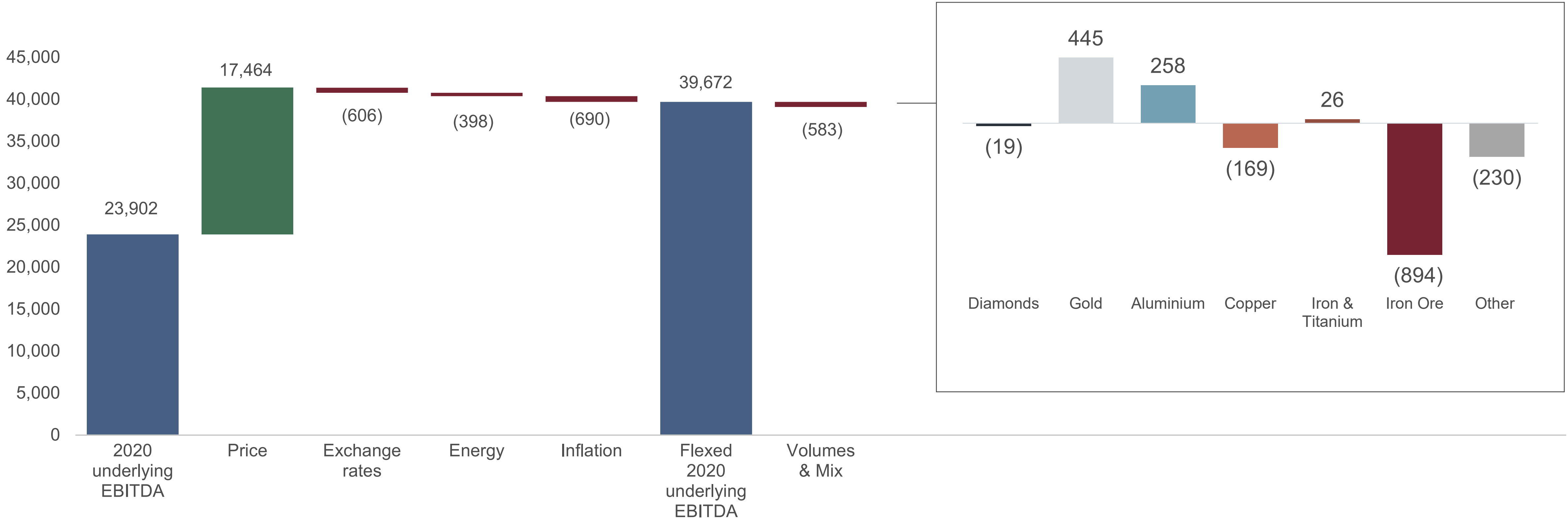
Underlying EBITDA 2021 vs 2020
$ million



*Aluminium includes alumina and bauxite and includes movements in market and other premia

Lower volume in iron ore driven by weather, heritage management and delays in mine tie-in projects

Underlying EBITDA 2021 vs 2020
$ million



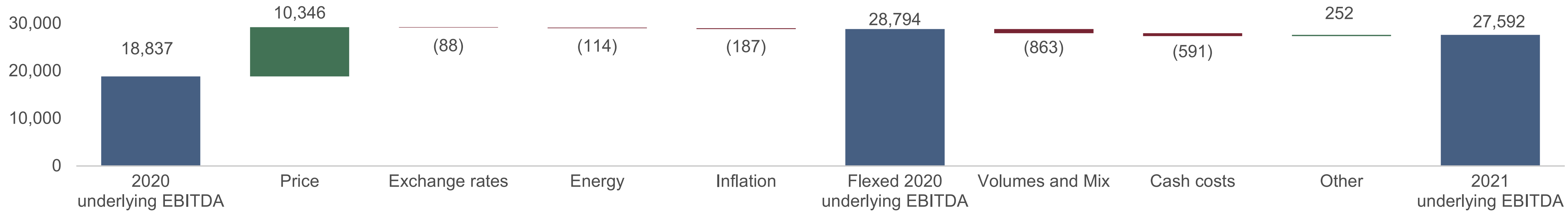
Aluminium includes alumina and bauxite. Aluminium variance excludes profit impact of volumes lost related to Kitimat pot relining and ISAL preventative pot-line shutdown.

Iron Ore

Strong pricing supports EBITDA

Underlying EBITDA 2021 vs 2020

$ million



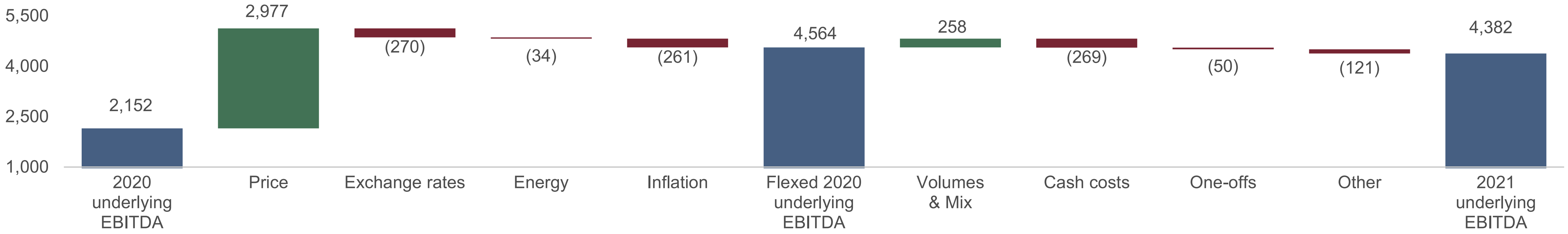
- Our Pilbara iron ore shipments decreased by 3% compared with 2020. Shipments were impacted by lower mined production due to above-average rainfall in the first half of 2021, cultural heritage management and delays in growth and brownfield mine replacement tie-in projects.
- Underlying EBITDA of $27.6 billion was 46% higher than 2020, driven by higher prices ($10.3 billion), with a 45% rise in the monthly average Platts index for 62% iron fines adjusted to an FOB basis compared with 2020. This more than compensated for the impact from reduced shipments and rising unit costs.
- 2021 Pilbara unit cash costs, which were $18.6 per tonne (excluding COVID-19 costs of $0.5 per tonne), marginally exceeded guidance of $18.0 to 18.5 per tonne and compared with $14.8 per tonne in 2020 (excluding COVID-19 costs of $0.6 per tonne). Unit cost performance was driven by higher input prices including labour, explosives and energy, a 9% stronger Australian dollar, an increase in the mine work index, operational readiness costs for our growth and brownfield mine replacement tie-in projects and fixed cost inefficiencies from lower volumes.
- Our Pilbara operations delivered an underlying FOB EBITDA margin of 76%, compared with 74.0% in 2020.
- Gross product sales for our Pilbara operations included freight revenue of $2.7 billion (2020: $1.5 billion).
- We price the majority of our iron ore sales (77%) by reference to the average index price for the month of shipment. In 2021, we priced approximately 11% of sales with reference to the prior quarter's average index lagged by one month with the remainder sold either on current quarter average, current month average or on the spot market. We made approximately 72% of sales including freight and 28% on an FOB basis.
- We continue to increase our iron ore portside sales in China, with a total of 14.0 million tonnes in 2021 (2020: 5.5 million tonnes). We experienced increased inventory levels of Pilbara product at the port at December (2021: 8.8 million tonnes, 2020: 1.7 million tonnes), due to higher volumes of SP10 and constrained availability of high grade blending stocks in the fourth quarter.

Aluminium

Higher prices, recovery of VAP demand and volumes

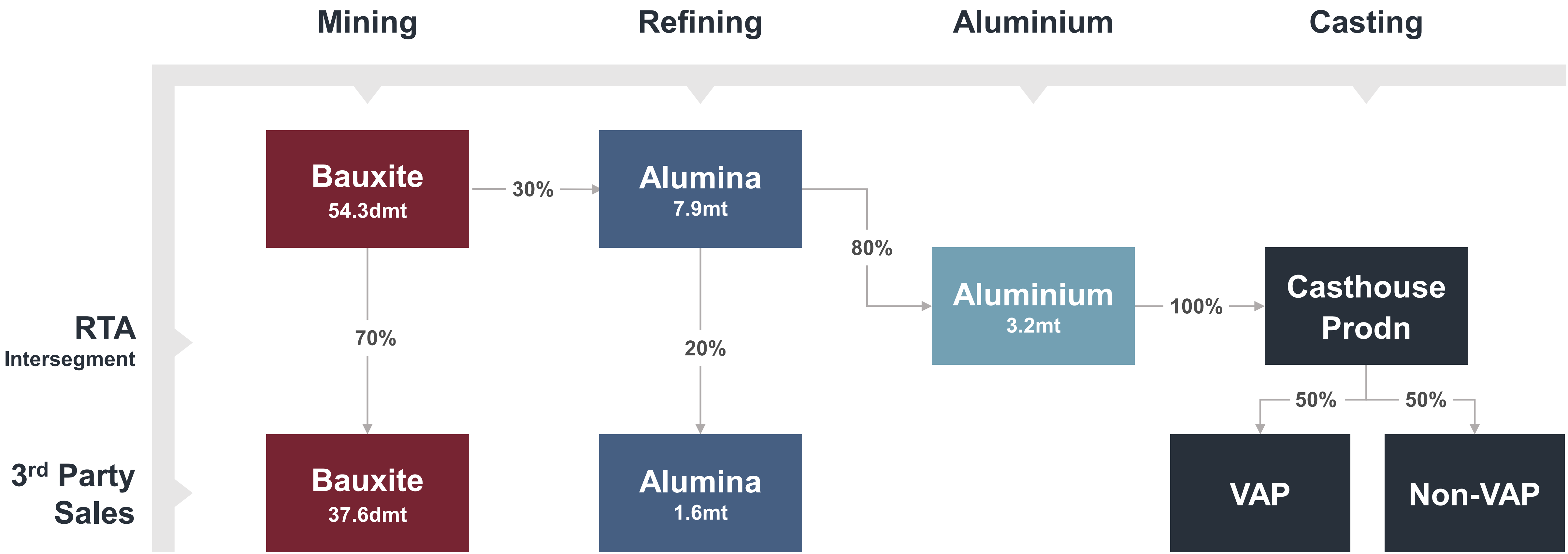
Underlying EBITDA 2021 vs 2020

$ million



- In 2021, aluminium prices rallied to multi-year highs, following a firm recovery in global demand and extensive power-related supply disruptions in China, which led to a global market deficit.
- This rebound in sales prices, together with increased demand for value-added product (VAP), were the key drivers for our aluminium business to more than double underlying EBITDA and deliver a substantial increase in cash flow.
- Underlying EBITDA of $4.4 billion, which was 104% higher than 2020, benefited from the stronger pricing environment, in particular for primary metal and alumina, and higher product premiums for primary metal. This was only partly offset by the impact of stronger local currencies, lower bauxite and alumina shipments and cyclical cost inflation for coke, pitch and alloys. This increased our industry-leading underlying EBITDA margin to 38%.
- We achieved an average realised aluminium price of $2,899 per tonne, 49% higher than 2020 ($1,946 per tonne). This comprised the LME price, a market premium and a product (VAP) premium.
- The cash LME price averaged $2,480 per tonne, 46% higher than 2020, while in our key US market, the midwest premium duty paid increased by 119% to $584 per tonne (2020: $267 per tonne).
- Our VAP sales represented 50% of the primary metal we sold (2020: 43%) and generated product premiums averaging $230 per tonne of VAP sold (2020: $213 per tonne).
- We generated $3.6 billion in net cash from operating activities, reflective of the higher underlying EBITDA achieved, net of a $0.5 billion build in working capital, driven by the higher pricing environment and supply chain constraints.
- Free cash flow increased by 155% to $2.3 billion.
- Although we are broadly balanced in alumina, approximately 2.2 million tonnes of our legacy alumina sales contracts are exposed to a fixed linkage to the LME price. These contracts date back to 2005 or earlier, and the majority expire between 2023 and 2030.

Aluminium Value Chain
2021 Actuals

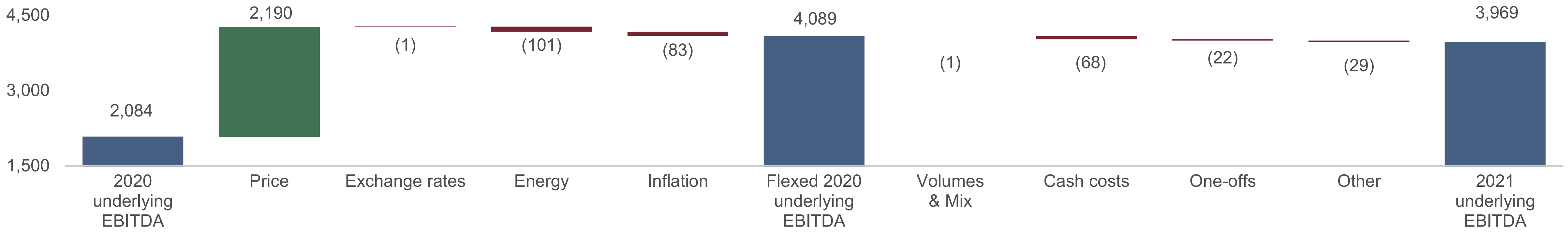


Copper

Higher prices, volume impacted by COVID-19

Underlying EBITDA 2021 vs 2020

$ million



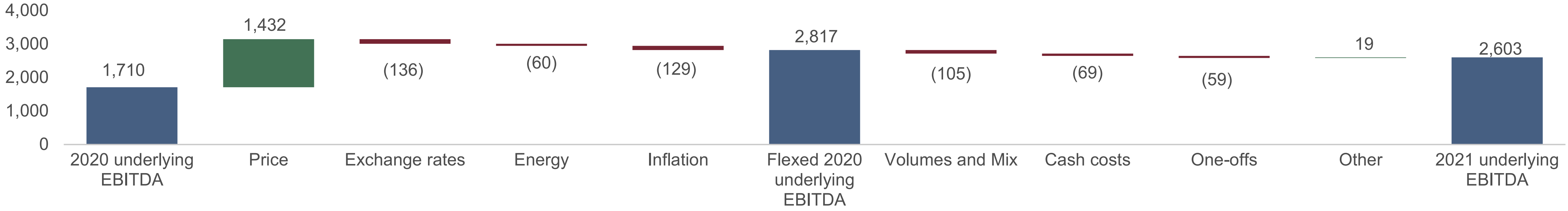
- At $4.0 billion, underlying EBITDA was up 90%, with margins rising to 59%, driven by the strong recovery in prices and an improved smelter performance at Kennecott in the US.
- The improvement in our financial performance was primarily attributable to strong market conditions, with the copper price driven higher by renewed speculative interest, declining LME stocks, a weaker US dollar and COVID-related supply constraints.
- We also benefited from higher sales volumes of refined metal at Kennecott and temporarily higher gold grades at Oyu Tolgoi in Mongolia. These compensated for lower volumes at Escondida in Chile, where ongoing preventive measures in response to COVID-19 continued to impact workforce availability.
- Our average realised copper price increased by 50% to 424 US cents per pound, even before taking into account the provisional pricing benefit to revenues of $246 million in 2021, while the benchmark gold price rose just 2% to $1,799 per ounce.
- We incurred additional costs related to our response to COVID-19, higher energy costs and higher unit costs at Escondida due to lower concentrator throughput.
- We generated $2.6 billion in net cash from our operating activities, a 168% increase on 2020, from the same drivers as underlying EBITDA and a $0.8 billion increase in dividends from our 30% equity holding in Escondida to $1.4 billion, partly offset by a $0.4 billion tax payment in Mongolia.
- Free cash flow of $1.3 billion reflected the higher operating cash flow and high level of capital investment ($1.3 billion), mainly relating to the ongoing development of the Oyu Tolgoi underground project, where we have a 34% effective interest but fully consolidate on the basis of management control.
- Our copper unit costs, at 82 cents per pound in 2021, were 26% lower than in 2020, but marginally above guidance of 75 to 80 cents per pound. Lower throughput and grades at Escondida and higher royalties, in line with stronger prices, at Kennecott and Oyu Tolgoi were offset by higher production of copper and, in particular, gold at Oyu Tolgoi, driven by higher grades.

Minerals

Strong pricing across portfolio supports EBITDA

Underlying EBITDA 2021 vs 2020

$ million



- In 2021, we benefited from strong market conditions in particular for iron ore pellets and concentrate, but also for titanium dioxide pigment and borates, driven by global economic growth and underpinned by a robust construction market. We also saw a recovery in diamond prices following a pandemic-related build-up of demand and low inventory levels.
- Underlying EBITDA of $2.6 billion was 52% higher than 2020, primarily due to the strong pricing environment which more than offset the impact of lower volumes, which in turn drove up unit cash costs due to fixed cost inefficiencies.
- We generated net cash of $1.4 billion from our operating activities, and $0.8 billion of free cash flow, 28% and 19% higher than 2020, respectively, reflecting the strong pricing environment and higher dividends paid to holders of non-controlling interests at Iron Ore Company of Canada.
- The business continued to comply with government-imposed COVID-19 restrictions, notably in Canada, the US and South Africa. At our titanium dioxide business we experienced 9% lower production, as a result of community disruptions and subsequent curtailment of operations at Richards Bay Minerals (RBM) in South Africa for around three months coupled with an extended ramp-up period, as well as unplanned maintenance and equipment reliability issues at Rio Tinto Fer et Titane (RTFT) in Canada.
- On 18 November, we announced we had become the sole owner of Diavik Diamond Mine in the Northwest Territories of Canada, continuing its leading role in the Canadian diamond industry.

Other movements in underlying EBITDA

Underlying EBITDA impact

$ million	2020	FX/ price	Energy & Inflation	Volumes	Cash costs	E&E	Non-cash	Other	2021
Other operations	24	578	-91	37	-56	0	-102	-418	-28
Exploration & Evaluation (net)	-250	-10	-5	-	-	3	5	-	-257
Other	-655	-158	-24	91	1	-28	42	190	-541
Total	**-881**	**410**	**-120**	**128**	**-55**	**-25**	**-55**	**-228**	**-826**

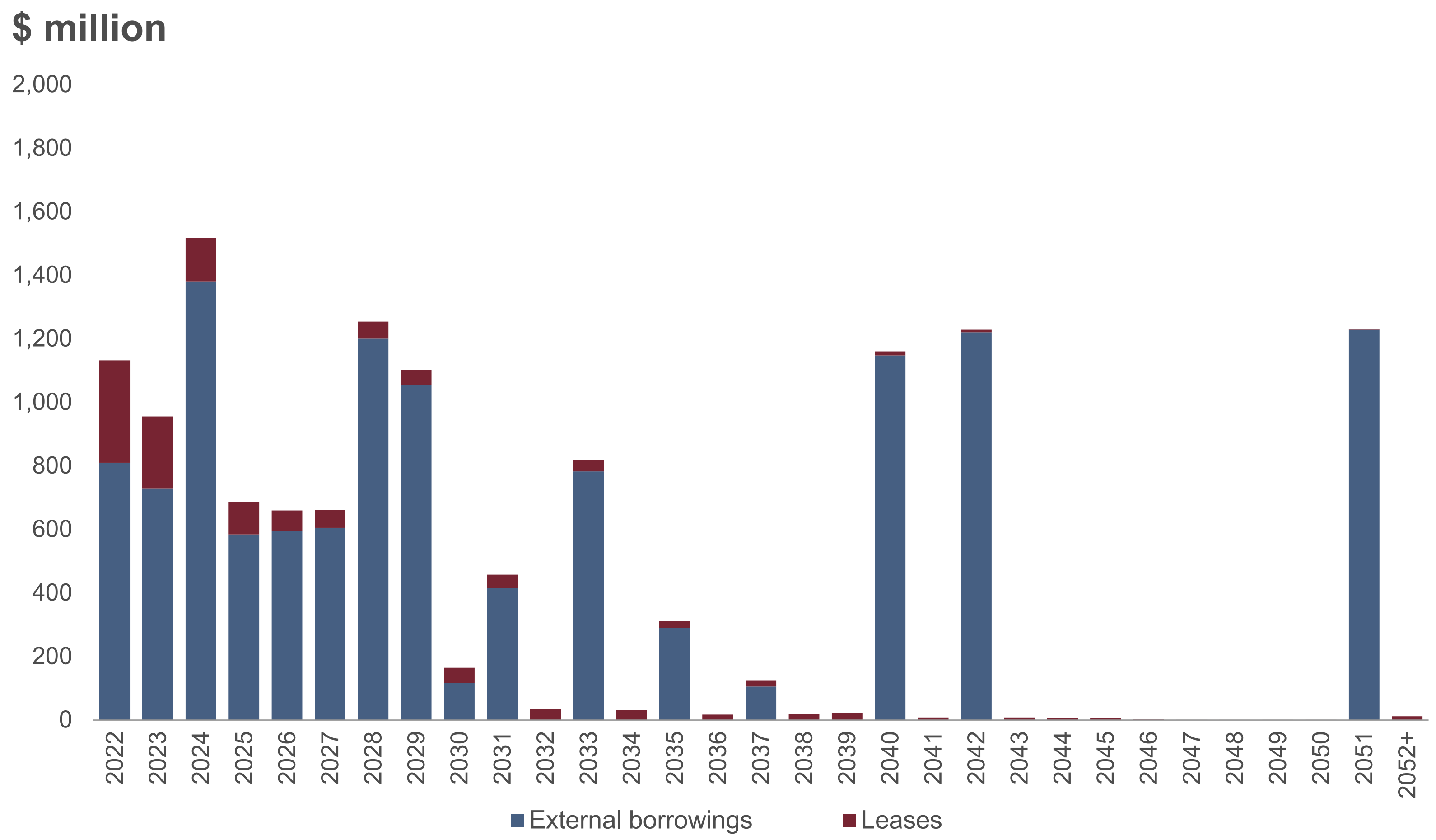
- Other operations include our 100% interest in the Gove alumina refinery (under rehabilitation), Rio Tinto Marine, and the remaining legacy liabilities of Rio Tinto Coal Australia. These include provisions for onerous contracts, in relation to rail infrastructure capacity, partly offset by financial assets and receivables relating to contingent royalties and disposal proceeds. From 1 January 2021, Uranium moved from Minerals to Other operations. From 1 January 2021, Argyle closure is reported as part of Other Operations.
- We have a strong portfolio of exploration projects with activity in 18 countries across seven commodities in early exploration and studies stages, reflected in our pre-tax central spend of $257 million. All projects have followed government COVID-19 requirements, while focusing on protecting the wellbeing and health of local communities.

Other: inter-segment transactions, central costs (pensions, share-based payments, insurance and derivatives), restructuring, project and one-off costs

- Pre-tax central pension costs, share-based payments, insurance and derivatives were a $110 million credit compared with a $117 million credit in 2020, mainly due to higher insurance recoveries in 2021 combined with slightly lower claims than in 2020, offset by derivative losses in 2021 of $97 million compared to gains of $45 million in 2020.
- On a pre-tax basis, restructuring, project and one-off central costs were 40% lower than 2020 mainly due to lower central provisions for closure costs.
- Other central costs of $613 million were 12% higher than in 2020 driven by stronger local currencies and inflation, along with increased costs associated with progressing our Communities and Social Performance and ESG objectives.

Debt maturity profile

31 December 2021 debt maturity profile*



Average outstanding debt maturity of corporate bonds extended to ~16 years following the bond maturity extension transaction undertaken in H2 2021 (~11 years for Group debt)

No corporate bond maturities until 2024

Liquidity remains strong under stress tests

In H2 2021, the $7.5bn back-stop Revolving Credit Facility was re-financed and now matures in November 2026. It has two additional one-year extension options

*Numbers based on December 2021 accounting value. The debt maturity profile shows $1.4 billion of capitalised leases under IFRS 16.

Pro-forma net debt reconciliation

$ billion

	2021	2020
Reported net (cash)/debt	**(1.6)**	**0.7**
Australian tax top-up in June of following year	1.1	0.9
Proforma net (cash) debt	**(0.5)**	**1.6**

Group level financial guidance

	2022	2023	2024
CAPEX			
Total Group	~$8.0bn	~$9.0 – 10.0bn	~$9.0 – 10.0bn
Sustaining Capex Group	~$3.5bn	~$3.5bn	~$3.5bn
Pilbara Sustaining Capex	~$1.5bn	~$1.5bn	~$1.5bn
- $0.5bn* per year to decarbonise our assets from 2022 to 2024 - Total decarbonisation investment of ~$7.5bn* from 2022 to 2030, predominantly in second half of decade		- Ambition to grow and decarbonise reflected in 2023-24 capex of $9-10bn including up to $3bn in growth spending, depending on opportunities - Replacement spending $2-3bn per year	
Effective tax rate	30%		
Returns	Total returns of 40 – 60% of underlying earnings through the cycle		

*Estimated investment as of 31 Dec 2021. Marginal Abatement Cost Curves (MACC) and large decarbonisation projects will be updated regularly

Product group level guidance

	2022 Production Guidance	2022 Costs
Iron Ore Shipments	320 – 335Mt[1] (100% basis)	$19.5-21.0/wmt (FOB), based on an Australian dollar exchange rate of $0.75
Copper		C1 Copper unit costs 130-150 US c/lb
Mined Copper	500 to 575kt	
Refined Copper	230 – 290kt	
Aluminium		Modelling guidance provided for Canadian smelters only (see slide 63)
Bauxite	54 – 57Mt	
Alumina	8.0 – 8.4Mt	
Aluminium	3.1 – 3.2Mt	
Minerals		
TiO_2	1.1 to 1.4Mt	
IOC pellets and concentrate[2]	10.0 – 11.0Mt	
B_2O_3	~0.5Mt	
Diamonds[3]	5.0 – 6.0m carats	

[1] Pilbara shipments guidance remains subject to risks around commissioning and ramp-up of new mines and management of cultural heritage. | [2] Iron Ore Company of Canada. | [3] Reflects 100% ownership of Diavik (previously 60%)

Modelling EBITDA

Underlying EBITDA sensitivity

	Average published price/exchange rate for 2021	US$ million impact on full year 2021 underlying EBITDA of a 10% change in prices/exchange rates
Copper	422c/lb	543
Aluminium	$2,480/t	813
Gold	$1,799/oz	120
Iron ore realised price (62% Fe CFR freight-adjusted)	$143.8/dmt	3,605
A$	0.75US$	736
C$	0.80US$	285
Oil (Brent)	$70/bbl	111

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

Modelling aluminium costs

Canadian* smelting unit cash** cost sensitivity

	($/t) Impact a $100/t change in each of the input costs below will have on our 2021 Canadian smelting unit cash cost of $1,373/t
Alumina (FOB)	$191
Green petroleum coke (FOB)	$25
Calcined petroleum coke (FOB)	$36
Coal tar pitch (FOB)	$8

* Canadian smelters include all fully-owned smelters in Canada (Alma, AP60, Arvida, Grande-Baie, Kitimat, and Laterrière), as well as Rio Tinto's share of the Becancour and Alouette smelters
** The smelting unit cash costs refer to all costs which have been incurred before casting, excluding depreciation but including corporate allocations and with alumina at market price, to produce one metric tonne of primary aluminium

Application of the returns policy

Capital return considerations	Comments
Results for FY 2021	– Operating cash flow of **$25.3 billion** – FCF of **$17.7 billion**[1] – Underlying earnings up 72% to **$21.4 billion**
Long-term growth prospects	– Focused on Oyu Tolgoi – Investing in replacing high quality assets in Pilbara, Kennecott and Zulti-South – Ongoing exploration and evaluation programme – Winu
Balance sheet strength	– Strong balance sheet with net cash of **$1.6 billion**
40-60 per cent of underlying earnings through the cycle	– **Pay-out of 79%** based on (i) Strong financial performance in 2021 (ii) strong balance sheet
Balanced between growth and shareholder returns	– Defined growth pipeline and a strong balance sheet providing capacity for shareholder return
Outlook	– Encouraged by growth prospects in the coming year – Remain vigilant in relation to potential disruption from new COVID-19 variants and geopolitical tensions

[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

Oyu Tolgoi delivers substantial economic value to Mongolia

FDI

OT accounts for **one-third of Mongolia's GDP;** 70% of Foreign Direct Investment

Jobs

Country's largest private-sector employer, workforce of 12,000 is >96% Mongolian

Taxes

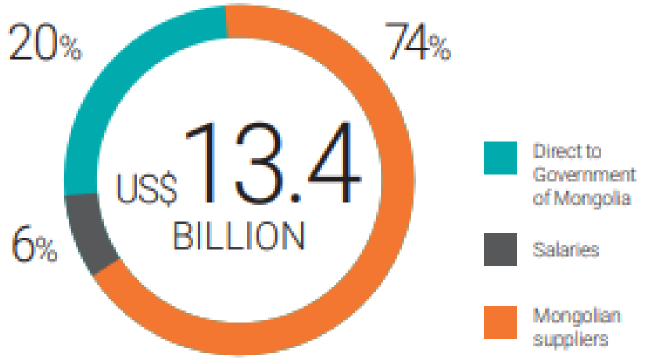
Since 2010, OT has spent US$13.4bn in-country in the form of salaries, payments to Mongolian suppliers, taxes and other payments to the Government of Mongolia.

Since 2010, **OT has paid US$3.6bn in taxes, fees and other payments.**

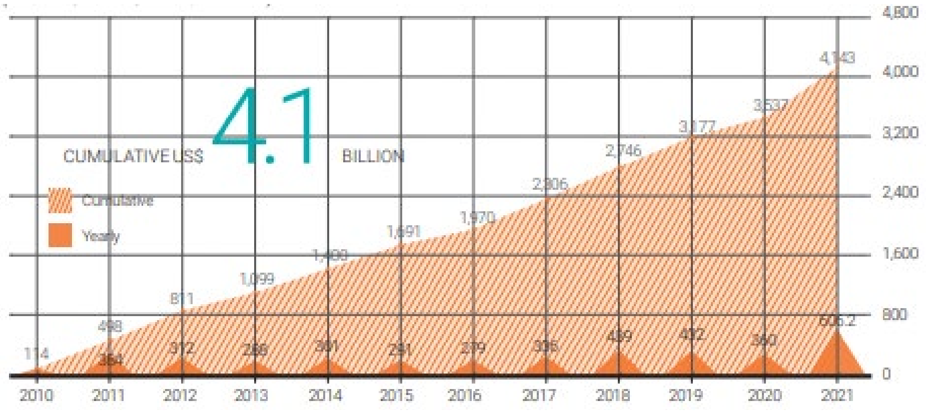
Local spend

$4.1bn on national procurement spend since 2010; National procurement spend is 71% of total spend. 864 suppliers of which 540 are national businesses.

Total in-country spend
(2010 – Q4 2021)



National procurement
(2010 – 2021, in US$ millions)



Source: World bank

Group Income Statement and Cash flow statement

	Rio Tinto Group		Oyu Tolgoi and Turquoise Hill[1]		Proforma Rio Tinto Group (excluding OT and TRQ)[2]	
	Dec-21 YTD US$m	Dec-20 YTD US$m	Dec-21 YTD US$m	Dec-20 YTD US$m	Dec-21 YTD US$m	Dec-20 YTD US$m
Consolidated sales revenue	63,495	44,611	1,971	1,078	61,524	43,533
Profit after tax for the period	22,575	10,400	893	357	21,682	10,043
– attributable to owners of Rio Tinto (net earnings)	21,094	9,769	397	227	20,697	9,542
– attributable to non-controlling interests	1,481	631	496	130	985	501
Alternative performance measures (as per Financial Information by Business Unit)						
Underlying EBITDA	37,720	23,902	1,213	390	36,507	23,512
Underlying Earnings	21,380	12,448	325	160	21,055	12,288
Cash flows from operations	35,367	22,416	825	380	34,542	22,036
Capital expenditure	(7,384)	(6,189)	(911)	(1,038)	(6,473)	(5,151)

Oyu Tolgoi (OT) and Turquoise Hill Resources (TRQ) are fully consolidated in the Rio Tinto accounts – Rio Tinto's economic ownership is 33.5%. These tables are provided to be able to see the OT/TRQ accounts on a stand alone basis.

[1] Represents the amounts shown in the subsidiaries' financial statements prepared in accordance with IFRS under Rio Tinto Group accounting policies, including fair value adjustments, and before intercompany eliminations.
[2] Includes income and expenses arising in other Rio Tinto group companies from transactions with Oyu Tolgoi and Turquoise Hill.

Group Balance Sheet

	Rio Tinto Group		Oyu Tolgoi and Turquoise Hill[1]		Proforma Rio Tinto Group (excluding OT and TRQ)	
	Dec-21 YTD US$m	Dec-20 YTD US$m	Dec-21 YTD US$m	Dec-20 YTD US$m	Dec-21 YTD US$m	Dec-20 YTD US$m
Non-current assets	78,464	76,535	12,250	10,930	66,214	65,605
Current assets	24,432	20,855	1,129	1,496	23,303	19,359
Total assets	102,896	97,390	13,379	12,426	89,517	84,964
Current liabilities	(12,627)	(11,607)	(954)	(540)	(11,673)	(11,067)
Non-current liabilities[2]	(33,679)	(33,880)	(4,085)	(4,404)	(29,594)	(29,476)
Total liabilities	(46,306)	(45,487)	(5,039)	(4,944)	(41,267)	(40,543)
Net assets	56,590	51,903	8,340	7,482	48,250	44,421
Equity attributable to non-controlling interests	5,158	4,849	2,846	2,424	2,312	2,425
Equity attributable to owners of Rio Tinto	51,432	47,054	5,494	5,058	45,938	41,996
Total equity	56,590	51,903	8,340	7,482	48,250	44,421
Alternative performance measures (as per Financial Information by Business Unit)						
Operating assets	49,856	47,718	8,998	8,111	40,858	39,607
Net cash/(debt)	1,576	(664)	(3,504)	(3,053)	5,080	2,389
Equity attributable to owners of Rio Tinto	51,432	47,054	5,494	5,058	45,938	41,996

Oyu Tolgoi (OT) and Turquoise Hill Resources (TRQ) are fully consolidated in the Rio Tinto accounts – Rio Tinto's economic ownership is 33.5%. These tables are provided to be able to see the OT/TRQ accounts on a stand alone basis.

[1] Represents the amounts shown in the subsidiaries' financial statements prepared in accordance with IFRS under Rio Tinto Group accounting policies, including fair value adjustments, and before intercompany eliminations.
[2] Rio Tinto plc has provided a guarantee, known as the completion support undertaking (CSU), in favour of the Oyu Tolgoi LLC project finance lenders. At 30 June 2021 and 31 Dec 2021, US$4.3bn of project finance debt was outstanding under this facility.

Common acronyms

T	Tonne
Mt	Million tonnes
Gt	Giga tonnes
tCO_2	Tonne of carbon dioxide
tCO_2 e	Tonne of carbon dioxide equivalent
Pa	Per annum
PJ	Petajoule
Mtpa	Million tonnes per annum
CO_2	Carbon dioxide
GHG	Greenhouse gas
MACC	Marginal Abatement Cost Curve
Mwh	Megawatt hour
MW	Megawatt
GW	Gigawatt

RTSPS	Rio Tinto Safe Production Sytem
ROCE	Return on capital employed
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation
CAGR	Compound annual growth rate
USD	United States dollar
Bn	Billion
NPV	Net present value
ESG	Environmental, Social, and Governance
IRR	Internal rate of return
R&D	Research and development
VAP	Value-added product