Cautionary and supporting statements

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Production Targets

The 500ktp copper and 350kzpa gold target (stated as recoverable metal) for the Oyu Tolgoi underground and open pit mines for the years 2028 to 2036 referenced in slide 92 is underpinned 13% by Proved Ore Reserves and 87% by Probable Ore Reserves. This production target has been derived 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 93 are underpinned 41% by Proved Ore Reserves and 59% by Probable Ore Reserves for 2023 to 2027, and 10% by Probled Ore Reserves and 90% by Probable Ore Reserves for 2028 to 2036. The life of mine production profile shown in slide 93 is underpinned 22% by Proved Ore Reserves and 78% by Probable Ore Reserves for 2023 to 2051. The financial forecasts shown in slide 94 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 Probled Ore Reserves and 74% by Probable Ore Reserves for 2026 to 2029, and 9% by Probled Ore Reserves and 91% by Probable Ore Reserves for 2030 to 2033. These production targets are stated as recovered metal and have been derived 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).

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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,” “believe,” “expects,” “may,” “should,” “will,” “target,” “set to” or similar expressions, commonly identify such forward-looking statements.

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   iv. Minerals
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07 Closure, Technical & Projects
08 Financial information & policies
09 Governance
Who we are

Our purpose
Finding better ways to provide the materials the world needs

Our strategy

Decarbonise our assets
50% reduction in our emissions by 2030

Help our customers decarbonise
Developing products and technologies

Growing in materials enabling the energy transition
Ambition to double investment in growth

Our values

Care
Courage
Curiosity
What we do

We own and manage a portfolio of world-class assets in 35 countries:

- Alumina
- Aluminium
- Bauxite
- Borates
- Copper
- Diamonds
- Iron ore
- Lithium
- Salt
- Titanium dioxide
Mines, smelters, refineries, power facilities and processing plants remote from mine projects.

Where we operate:

- Aluminium
- Copper
- Iron Ore
- Minerals

- Mines
- Smelters, refineries, power facilities and processing plants remote from mine
- Projects
- Offices
More than 81% of non-current assets in OECD

2022 non-current assets (other than excluded items* and non-controlling interest) by region

- Canada: 20%
- US: 10%
- South America: 4%
- Africa: 2%
- Mongolia: 13%
- Other Asia: 4%
- Australia / NZ: 47%

*Non-current assets excluded from the analysis were: Minority interests, deferred tax assets, Other financial assets (including loans to equity accounted units), Quasi equity loans to equity accounted units, tax recoverable and trade and other receivables.
Safety

Our number one priority:
Goal is zero fatalities*
Focus is identifying, understanding, managing and eliminating safety and work-related health risks
Work-life balance
Mental health awareness

*Exceeded four years of zero fatalities (2019-June 2023).
Our history

- **1873** Rio Tinto founded
- **1925** Joint ventures, technological developments and overseas expansion
- **1963** Produced the first bauxite from Weipa in Queensland, Australia
- **1966** Shipped the first iron ore from the Pilbara, Western Australia to Japan
- **1968** Acquired US Borax, California
- **1995** Became the first mining company in Australia to embrace Indigenous people’s land rights
- **1995** RTZ Corporation and CRA Limited merge to form dual-listed company
- **2000** Acquired North Limited
- **2003** First production of diamonds at Diavik, Northwest Territories, Canada
- **2007** Acquired Alcan
- **2015** Signed the Paris Pledge on climate change
- **2018** Became the first major mining company to have a portfolio free of fossil fuel production
- **2018** Construction begins on the Gudai-Darri iron ore mine in Western Australia
- **2018** Launched ELYSIS joint venture with Alcoa
- **2020** Destruction of Juukan Gorge rock shelters. We unreservedly apologise, take action to improve
- **2021** Revised strategy and accelerated actions on climate change
- **2022** Published Everyday Respect Report on workplace culture, committed to implementing all 26 recommendations
- **2022** Completed acquisition of Rincon, undeveloped lithium brine project in Argentina
Our people
At 31 December 2022:

54,000 people in 35 countries

30,000 workforce in Australia and New Zealand

17,000 workforce across Canada and the US

53% of graduate in-take were women in 2022

46 Australian Indigenous leaders (up 48% compared to 2021)

Rio Tinto
Our business model

Explore and evaluate
Develop and innovate
Mine and process
Market and deliver
Repurpose and renew

Underpinned by disciplined capital allocation
Our structure

4 product groups
- Iron Ore
- Aluminium
- Copper
- Minerals

Supported by
- Development & Technology
- Commercial

Support functions
- Legal, Governance & Corporate Affairs
- Communities & Social Performance (CSP)
- Finance
- Group Internal Audit
- HSES
- Information Systems & Technology (IS&T)
- Human Resources
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 while maintaining financial strength and resilience

Social licence
- Make long-term, positive change to our culture
- Be an attractive partner to our customers and host countries
- Partner and restore trust within the community for shared success
Balancing near-term returns to shareholders

1. Essential capex
   Integrity, Replacement, Decarbonisation

2. Ordinary dividends

3. Iterative cycle of

- Further cash returns to shareholders
- Compelling growth
- Debt management
H1 2023 highlights

Half Year Results 2023 Release - link
## Robust results

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

\(^1\)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
Revenue – H1 2023

Revenue by destination
- Greater China: 58%
- US: 15%
- Other Asia: 7%
- Japan: 7%
- Europe: 6%
- Other: 7%

Revenue by commodity
- Iron ore: 61%
- Aluminium, alumina & bauxite: 23%
- Copper: 6%
- Industrial minerals: 5%
- Other: 5%
Pilbara Iron Ore, Canadian smelters and Oyu Tolgoi driving our momentum

<table>
<thead>
<tr>
<th>$bn, except where stated</th>
<th>Iron Ore</th>
<th>Aluminium</th>
<th>Copper</th>
<th>Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustained operational improvement vs H1 22</td>
<td>160.5mt¹</td>
<td>1.6mt²</td>
<td>0.3mt³</td>
<td>0.6mt⁴</td>
</tr>
<tr>
<td>Underlying EBITDA</td>
<td>9.8</td>
<td>1.1</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>EBITDA margin⁵,⁶</td>
<td>69%</td>
<td>21%</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>Capex</td>
<td>1.1</td>
<td>0.6</td>
<td>0.9</td>
<td>0.3</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>5.6</td>
<td>0.2</td>
<td>(0.5)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>ROCE⁶</td>
<td>63%</td>
<td>4%</td>
<td>4%</td>
<td>13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance</th>
<th>Iron Ore</th>
<th>Aluminium</th>
<th>Copper</th>
<th>Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Five quarters of improved operational performance</td>
<td></td>
<td></td>
<td></td>
<td>• IOC: forest fires impact production, lower prices</td>
</tr>
<tr>
<td>• Gudai-Darri at full capacity</td>
<td></td>
<td></td>
<td></td>
<td>• Weaker market conditions for Iron &amp; Titanium and Boron businesses</td>
</tr>
<tr>
<td>• Shipments guidance now at upper half of range</td>
<td></td>
<td></td>
<td></td>
<td>• Higher spending on Rincon 3000 starter plant with valuable insights gained and carried over to design and engineering of full-scale project</td>
</tr>
<tr>
<td>• With rising second half volumes, SP10 expected to be a larger proportion of shipments (10% in first half)</td>
<td></td>
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<tr>
<td>• Construction of Western Range in line with schedule</td>
<td></td>
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</tr>
<tr>
<td>• Metal volumes +9% versus first half 2022 as Kitimat ramps up to full capacity by year end</td>
<td></td>
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</tr>
<tr>
<td>• Price declines drive margins down, lower raw material costs to flow through in second half</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• Upgrading quality of highly competitive Canadian smelters with AP60 expansion, Alma VAP, Arvida recycling capacity and formation of Matalco recycling joint venture</td>
<td></td>
<td></td>
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<tr>
<td>• Margins remain robust despite 10% decline in LME copper</td>
<td></td>
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</tr>
<tr>
<td>• Achieved sustainable production from Oyu Tolgoi underground</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Investing in Kennecott’s future with smelter rebuild and underground</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Geotechnical challenges and unplanned concentrator maintenance at Escondida</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

¹Pilbara production on a 100% basis | ²Rio Tinto share | ³Mined copper on a consolidated basis | ⁴TiO₂ production, Rio Tinto share | ⁵Pilbara 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 | ⁶Copper and Minerals defined as product group operations
Commodity prices recovering from low point in H2 but still down material 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)

<table>
<thead>
<tr>
<th>Material</th>
<th>H1 ‘22 (US$/dmt)</th>
<th>H2 ‘22 (US$/dmt)</th>
<th>H1 ‘23 (US$/dmt)</th>
<th>Delta (vs H1 ‘22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore ($/dmt)</td>
<td>121</td>
<td>94</td>
<td>107</td>
<td>-11%</td>
</tr>
<tr>
<td>Copper (c/lb)</td>
<td>447</td>
<td>362</td>
<td>396</td>
<td>-11%</td>
</tr>
</tbody>
</table>

¹Monthly average of Platts CFR index for 62% iron fines converted to FOB basis  
²Average LME price  
³Average LME price. MWP = US Midwest premium  
⁴LME plus all-in premiums (product and market)  
⁵YoY = 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 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
Pricing remains the biggest driver – rate of cost inflation slowing but still a headwind

### Underlying EBITDA

<table>
<thead>
<tr>
<th>H1 2022 Underlying EBITDA</th>
<th>Prices</th>
<th>Exchange rates</th>
<th>Inflation &amp; Market driven</th>
<th>Subtotal</th>
<th>Sales volumes &amp; mix</th>
<th>Cash unit cost increases</th>
<th>Temporary operational factors</th>
<th>Exploration &amp; Evaluation</th>
<th>H1 2023 Underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>15.6</td>
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<td>(3.3)</td>
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<td>(0.3)</td>
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<td>12.4</td>
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<td>(0.4)</td>
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<td>(0.4)</td>
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<td>11.7</td>
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</tr>
</tbody>
</table>

#### External $3.2bn

- Iron ore\(^1\) -1.6
- Aluminium\(^2\) -1.4
- Copper -0.2
- Other -0.1

#### Controllables $0.7bn

- Energy
  - Diesel +0.1
  - Other energy -0.1
- General inflation -0.4
- Inflation on closure & remediation provisions +0.2
- Aluminium raw materials -0.1

\(^1\)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

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

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
# Cash flow reconciliation

## H1 2023 Cash Flow (US$m)

<table>
<thead>
<tr>
<th>Profit after tax for the year/Underlying EBITDA</th>
<th>Statutory cash flow</th>
<th>Reconciling items</th>
<th>Underlying cash flow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,947</td>
<td></td>
<td>11,728</td>
</tr>
</tbody>
</table>

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)
- **Change in working capital**
  - (927)
- **Other items**
  - (116)  
  - 192  
  - 76

### Cash flows from consolidated operations

| 9,435 |

### Dividends from EAUs

| 287 |

### Net interest paid

| (286) |

### Dividends paid to non-controlling interests

| (46)  |

### Tax paid

| (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

<table>
<thead>
<tr>
<th>Close down and restoration</th>
<th>(333)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-retirement benefits and other employee benefits</td>
<td>(115)</td>
</tr>
<tr>
<td>Other provisions</td>
<td>(44)</td>
</tr>
<tr>
<td>(492)</td>
<td></td>
</tr>
</tbody>
</table>

## Change in working capital

<table>
<thead>
<tr>
<th>Inventories</th>
<th>(293)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade and other receivables</td>
<td>(6)</td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>(628)</td>
</tr>
<tr>
<td>(927)</td>
<td></td>
</tr>
</tbody>
</table>

## Other items

<table>
<thead>
<tr>
<th>Statutory</th>
<th>Reconciling items</th>
<th>Underlying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in non-debt derivatives</td>
<td>(73)</td>
<td>112²</td>
</tr>
<tr>
<td>Depreciation transferred</td>
<td>(88)</td>
<td>88³</td>
</tr>
<tr>
<td>Other items ³</td>
<td>45</td>
<td>(8)</td>
</tr>
<tr>
<td>(116)</td>
<td>192</td>
<td>76</td>
</tr>
</tbody>
</table>
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...

---

1Shareholder returns on a declared basis, excluding divestment proceeds returned to shareholders | 2Includes 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*

- **2018-2020:** 4.5
- **2021-2023:** 6.3
- **2024-2025:** <$7bn

- **Sustaining capex historical average:** ~$3bn

### Growth capex (US$bn)
*Shaping our portfolio for the future*

- **2022:** 0.6
- **2023:** 1.5
- **2024:** 3.0
- **2025:** <$3bn

Legend:
- Simandou
- Other
- OT
- Kennecott UG
Attractive dividends remain paramount

Shareholder returns\(^1\) of 40-60% of underlying earnings on average through the cycle

- **$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
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 (positive), 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)

<table>
<thead>
<tr>
<th>$bn</th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash generated from operating activities</td>
<td>7.0</td>
<td>16.1</td>
<td>25.3</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>3.0</td>
<td>6.8</td>
<td>7.4</td>
</tr>
<tr>
<td>Dividends paid</td>
<td>3.7</td>
<td>11.7</td>
<td>15.4</td>
</tr>
<tr>
<td>Net (debt)/cash</td>
<td>(4.4)</td>
<td>(4.2)</td>
<td>1.6</td>
</tr>
<tr>
<td>Cash and liquid resources</td>
<td>10.4</td>
<td>8.8</td>
<td>15.2</td>
</tr>
<tr>
<td>Revolving credit facility (5-year maturity)</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Net debt (cash)/Underlying EBITDA</td>
<td>0.19x</td>
<td>0.16x</td>
<td>-0.04x</td>
</tr>
<tr>
<td>Gearing</td>
<td>8%</td>
<td>7%</td>
<td>-3%</td>
</tr>
<tr>
<td>Weighted average debt maturity</td>
<td>12 yrs</td>
<td>11 yrs</td>
<td>11 yrs</td>
</tr>
</tbody>
</table>
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
## Simplified earnings by Business Unit for H1 2023

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

\(^1\)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
## Income Statement: exclusions

### Consolidated sales revenue

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

<table>
<thead>
<tr>
<th>Capex</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Group</td>
<td>~$7.0bn(^1)</td>
<td>Up to 10.0bn</td>
<td>Up to 10.0bn</td>
</tr>
<tr>
<td>Group Growth Capex</td>
<td>$1.5bn(^2)</td>
<td>Up to $3bn</td>
<td>Up to $3bn</td>
</tr>
<tr>
<td>Group Sustaining Capex</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
</tr>
<tr>
<td><em>Pilbara Sustaining Capex</em></td>
<td>~$1.5bn(^3),(^4)</td>
<td>~$1.5bn(^4),(^5)</td>
<td>~$1.5bn(^4),(^5)</td>
</tr>
</tbody>
</table>

- Replacement capital of $2-3bn per year

| Effective tax rate | ~30%          |

| Returns            | Total returns of 40 – 60% of underlying earnings through the cycle |

\(^1\) 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

<table>
<thead>
<tr>
<th>Product Group</th>
<th>2023 Production Guidance</th>
<th>2023 Unit cost guidance¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pilbara iron ore shipments</strong></td>
<td>320 – 335Mt¹ (100% basis)</td>
<td><strong>Pilbara Iron ore ($/tonne)</strong></td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td></td>
<td><strong>Copper C1 (US cents/lb)</strong></td>
</tr>
<tr>
<td>Mined Copper (consolidated basis)</td>
<td>590 – 640kt²</td>
<td>180 – 200</td>
</tr>
<tr>
<td>Refined Copper</td>
<td>160 – 190kt</td>
<td></td>
</tr>
<tr>
<td><strong>Aluminium</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bauxite</td>
<td>54 – 57Mt³</td>
<td></td>
</tr>
<tr>
<td>Alumina</td>
<td>7.4 – 7.7Mt</td>
<td></td>
</tr>
<tr>
<td>Aluminium</td>
<td>3.1 – 3.3Mt</td>
<td></td>
</tr>
<tr>
<td><strong>Minerals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TiO₂</td>
<td>1.1 – 1.4Mt³</td>
<td></td>
</tr>
<tr>
<td>IOC pellets and concentrate⁴</td>
<td>10.0 – 11.0Mt</td>
<td></td>
</tr>
<tr>
<td>B₂O₃</td>
<td>-0.5Mt</td>
<td></td>
</tr>
<tr>
<td>Diamonds</td>
<td>3.0 – 3.8m carats</td>
<td></td>
</tr>
</tbody>
</table>

¹In the upper half of the range. Pilbara shipments guidance remains subject to weather, market conditions and management of cultural heritage. ²Includes Oyu Tolgoi on a 100% consolidated basis and continues to reflect our 30% share of Escondida. ³In the lower end of the range. ⁴Iron Ore Company of Canada. ⁵FY23 guidance is based on A$-US$ exchange rate of 0.70.

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## Application of the returns policy

<table>
<thead>
<tr>
<th>Capital return considerations</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **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 |

¹Free 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.
Sustainability

Sustainability Fact Book 2022 - link
Sustainability framework

- Planet
  - Supplying low-intensity materials
  - Low-intensity materials
  - Economic opportunity & just transition
  - SDG 17
    - Transparent, values-based, ethical business operations
    - Becoming a trusted steward of resources

- People & society
  - Supporting social and economic opportunity
  - Lead SDG 8
  - Community engagement & social investment
  - Lead SDG 12
  - Economic opportunity & just transition
  - SDG 17
    - Supporting SDGs 3, 4, 5, 10, 15
    - Health, safety & wellbeing
    - Human rights
    - Talent, diversity & inclusion
    - Becoming a socially responsible business partner

Rio Tinto
We work hard to leave a lasting, positive legacy everywhere we work

50%
Reduction in emissions by 2030

$62.6m
Community investment in 2022

$218.1m
4-year total community investment

$10.8bn
Taxes and royalties in 2022
Strong safety performance

**All-injury frequency rate**
(per 200,000 hours worked)

- 2012: 0.67
- 2013: 0.67
- 2014: 0.59
- 2015: 0.44
- 2016: 0.44
- 2017: 0.42
- 2018: 0.44
- 2019: 0.42
- 2020: 0.37
- 2021: 0.4
- 2022: 0.40

- **Zero fatalities since 2019**

- **AIFR of 0.36**
  In first half 2023, remained stable since 2022

- **9 assets**
  Achieved an exposure reduction to known health risks in 2022
Communities

To us, communities aren’t just places. They are the people on whom our operations can have an impact and with whom we strive to build long-term partnerships.

$22.5bn
Spent with suppliers globally in 2022

22,000
Active suppliers

$218.1m
4-year total community investment

$62.6m
In community investment in 2022

Rio Tinto
Culture
Engagement scores improving

Avg. prior 2 years | Oct 21 | Apr 22 | Sep 22 | Apr 23
--- | --- | --- | --- | ---
72 | 71 | 71 | 73 | 74

1Percentage score for employee survey question regarding employee happiness in the workplace.
Climate change

We want to be part of the solution to the climate change challenge

50%
Reduction in emissions by 2030

75%
Of the electricity we use is from renewable sources

2050
Our commitment is to reach net zero emissions across our operations

$1.5bn
To be invested over next three years to decarbonise our assets
Our value chains

Source: 2022 Climate Change Report (page 5)
Processing accounts for the majority of our carbon footprint - Our scope 1 and 2 emissions

1Our Iron Ore product group is primarily our operations in the Pilbara and includes some salt production. Our Minerals Product Group includes the Iron Ore Company of Canada (IOC) | Our 2022 equity emissions does not include the additional equity share of the Oyu Tolgoi mine that was purchased in mid-December 2022 | Other includes PFCs and land-based emissions. Note the sum of the categories may be slightly different to the total due to rounding
Pursuing an abatement pathway to reach our 2030 target

2030 pathway: emissions reduction potential by major abatement programme

2018 emissions baseline: 32.5 Mt CO$_2$e
Emissions reduction to 2022: -2.2 Mt CO$_2$e
2022 emissions: 30.3 Mt CO$_2$e
Growth to 2030: 1.1 Mt CO$_2$e
Abatement programmes: -12.3 Mt CO$_2$e
Other required abatement (includes NbS): 2.8 Mt CO$_2$e

2030 emissions (50% reduction): 16.2 Mt CO$_2$e

New projects will need to be carbon neutral or have emissions mitigated elsewhere in the portfolio.
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 CO₂ 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
Supply chain emissions: scope 3 (equity basis)

583.9Mt CO$_2$e
## Decarbonisation abatement programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Description &amp; Key Sites</th>
<th>Funding mechanism</th>
<th>Example project - Economics</th>
</tr>
</thead>
</table>
| Pacific Operations      | **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                                                                 |
| Repower                 |                                                                                       |                                                                                 |                                                                                                    |
|                         | **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 |
| Renewables              |                                                                                       |                                                                                 |                                                                                                    |
|                         | **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\(^1\) & de-risking of technical risk in fleet electrification  
- Diesel cost savings post fleet electrification                                                                 |
| Diesel                  |                                                                                       |                                                                                 |                                                                                                    |
| 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  
- Technology and economics remain progressing on a number projects  
- The electrification of the boilers will require new commercial renewable energy contracts as well as capital |
|                         |                                                                                       |                                                                                 |                                                                                                    |
| Aluminium anodes        | **ELYSI\(^{TM}\) 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\(_2\)e, the range reflects varying project types and landscapes |
|                         |                                                                                       |                                                                                 |                                                                                                    |

\(^1\)At our Boron site due to Californian subsidies.
Green steel pathways: range of potential technology options available

<table>
<thead>
<tr>
<th>Estimated time to Commercial Scale¹</th>
<th>CO₂e (tLS) (using renewable power)</th>
<th>Ore Suitability Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF-BOF Optimisation</td>
<td>1-20 years</td>
<td>[Bars]</td>
</tr>
<tr>
<td>Nat Gas DRI/HBI Shaft</td>
<td>Today</td>
<td></td>
</tr>
<tr>
<td>H₂ DRI/HBI Shaft</td>
<td>5-10 years</td>
<td></td>
</tr>
<tr>
<td>H₂ DRI/HBI Fluidised Bed</td>
<td>5-20 years</td>
<td></td>
</tr>
<tr>
<td>H₂ DRI + Melter</td>
<td>10-20 years</td>
<td></td>
</tr>
<tr>
<td>Biomass (BioIron™)</td>
<td>10-20 years</td>
<td></td>
</tr>
<tr>
<td>Electrolysis</td>
<td>20-40 years</td>
<td>Likely requires ultra-premium quality</td>
</tr>
<tr>
<td>BF + CCUS</td>
<td>10-20 years</td>
<td></td>
</tr>
<tr>
<td>Scrap-EAF</td>
<td>Today</td>
<td>Not applicable – uses recycled steel</td>
</tr>
</tbody>
</table>

## Supporting our customers – steel decarbonisation

<table>
<thead>
<tr>
<th></th>
<th>Pathway 1</th>
<th>Pathway 2</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blast Furnace Optimisation</td>
<td>Optimising current technology</td>
<td>Entry to high-grade green iron market</td>
<td>Iron Ore Portfolio</td>
</tr>
<tr>
<td>2</td>
<td>Pilbara Beneficiation</td>
<td>Upgrading our Pilbara ores</td>
<td>High-Grade DRI</td>
<td>Brining high-grade ore to the market</td>
</tr>
<tr>
<td>3</td>
<td>BioIron™</td>
<td>Ironmaking with Pilbara ores Pathway 1</td>
<td>Ironmaking with Pilbara ores Pathway 2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>H₂ DRI + Melter</td>
<td>Developing an alternative steelmaking route to H₂ DRI</td>
<td>Developing H₂ DRI with melter for Pilbara ores</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>Entering H₂ HBI market and demonstrate new tech using RT ores</td>
<td></td>
</tr>
</tbody>
</table>

### Key Partnerships

- Salzgitter AG
- Metso Outotec
- Nippon Steel
- Kobe Steel
- Macquarie University
- Imperial College London
- BlueScope
- CQUniversity
- Australian National University
- Chinalco
- POSCO
- BAOWU
- University of Nottingham
- Onyx Technology
- Rio Tinto
- Chinese University
- Shougang Group
BiolIron™ – green alternative pathway for iron & steelmaking

Simple Raw Material Preparation

1 Fine Iron Ore, Fluxes and Biomass are blended together...
   
   ...and compacted into Green Briquettes

Ironmaking¹

3 Combusts volatiles and pre-heats the briquettes to >600°C ahead of microwave section

4 The microwave energy turns the pre-reduced ore into carbon-containing metallic iron²

5 Gangue removal in an Electric Melter

6 Pig Iron Product

¹Powered by renewable energy sources | ²Higher productivity compared to gas combustion | DRI: Direct Reduced Iron
H₂ DRI + Melter – Processing Pilbara ores with hydrogen

Transition to carbon-neutral: the industry is shifting from BF-BOF¹ to H₂ DR-EAF¹ steelmaking

Seaborne Iron Ore Product by Grade

<table>
<thead>
<tr>
<th>COMPARATIVE</th>
<th>BF-BOF¹</th>
<th>DR-EAF¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pellets</td>
<td>DR Shaft</td>
<td>EAF</td>
</tr>
<tr>
<td>Fines</td>
<td>DR Fluid Bed</td>
<td>BOF or EAF</td>
</tr>
</tbody>
</table>

Adding an Electric Melter to remove gangue enables the use of ore typically used in the blast furnace

¹BF: Blast Furnace, BOF: Basic Oxygen Furnace, DR: Direct reduction, HBI: Hot Briquetted iron, EAF: Electric Arc Furnace
An exciting future for Rio Tinto in the US

Our US footprint

- US demand to double over next decade from 2Mt to 4Mt, with growing import dependence\(^1\)
- Kennecott is 1 of 2 operating smelters and potential for life of mine beyond 2040\(^2\)
- Investment of ~$1B in Kennecott underground expansion and smelter rebuild, with further growth optionality
- Supplier of critical minerals, such as Tellurium
- Rebuilding the copper triangle with potential to supply ~25% of US domestic supply through Resolution\(^1\)
- Reducing our environmental footprint through our bioleaching technology through Nuton\(^\text{TM}\)
- Advancing our regional exploration portfolio

Well positioned to support the US energy transition
Nuton™ promises to deliver exceptional recovery

>80% recovery from primary copper sulphides, compared to 25-35% from traditional heap leach

Actual test results have supported our modelling work\(^1\)

Nuton delivers leading ESG performance

Nuton >80%

Conventional heap leach chemistry 25-35%

% extractions from primary copper mineralogy

---

\(^1\)Arizona Sonoran Copper Company \textit{release} (5 June 2023) and Regulus Resources \textit{release} (6 July 2023).

\(^2\)TMM = Total Material Movement.
Building a pipeline of opportunities

Yerington, Nevada-US
(Lion Copper Gold)

Los Azules, San Juan-Argentina
(McEwen Copper)

Cactus, Arizona-US
(Arizona Sonoran Copper Company)

AntaKori-Peru
(Regulus Resources)

Johnson Camp-US
(Excelsior Mining Corp.)
Market outlook
Energy trilemma to energy tripod

A shift in the energy market paradigm is taking place...

Low-cost renewables (needed to reach climate goals) will increase energy security reducing scope for price disruption over time

US Inflation Reduction Act provides ~$200 billion incentives and support by 2030 to firm these linkages

Europe’s REPowerEU Plan will allow members to access around €300 billion in loans and grants to accelerate renewable investment and increase energy efficiency and security\(^1\)

\(^1\) €225 billion of the remaining Recovery and Resilience Facility (RRF) loans plus new grants resulting in a total amount close to €300 billion, European Commission.
Steel decarbonisation will affect the value of iron ores

Industry decarbonisation efforts are focusing on direct reduction and liquid iron solutions:

- Direct reduction does not remove impurities, and significantly benefits high grade iron ore value.
- Liquid iron solutions will start with incremental blast furnace abatement followed by more transformative solutions.
- During the transition to green steel, ores with low iron making CO₂ emissions are well positioned.

Iron ore products – Steelmaking CO₂ emissions (BF/BOF)

1 Represents steelmaking emissions per tonne of liquid steel for each iron ore feedstock under today’s BF/BOF technology (China average archetype). Product volumes (represented by the bubble size) and silica + alumina content represent 2021 levels, except Simandou (blocks 3 and 4) which starts production at a later date.

2 The part of the Simandou resource that is very high grade resource has silica + alumina of ~1.6% and CO₂ emissions 1.1t CO₂/t steel under gas DRI/EAF. Does not include Scope 1 and 2 iron ore emissions (scope 3 downstream only). Source: Rio Tinto.
Outlook underpins a strong Rio Tinto for the long term

Total commodity demand by 2035 (<2°C scenario, Cu eq)¹

Total demand growth 3.9% CAGR between 2022 and 2035 with net demand uplift from Traditional and Energy Transition broadly equal

Each 1MW wind turbine requires²:
- 85-210t steel
- 2-12t Cu
- 1-2t Al
- ~200kg rare earths

Each 1MW solar panel requires:
- 35-45t steel
- 4.5t Cu
- 3.5-8t Al³

Each electric vehicle⁴ requires:
- 900kg steel
- 80kg Cu
- 280kg Al
- ~40kg Li₂CO₃ eq

¹Copper equivalent demand uses average annual prices from 2017-22 with finished steel demand in iron ore equivalent units. Energy Transition demand calculated on a gross basis. Based on Rio Tinto’s Competitive Leadership scenario. The contribution to growth is based on a net basis, for example, electric vehicles generate incremental demand for copper but actually contain less steel than internal combustion engines. ²Onshore wind vs. offshore wind. ³Framed vs. frameless panels. ⁴Electric vehicle requirements assume an average battery size of 55 kWh (2021). This is forecast to increase by 2030.
Rio Tinto

Product groups
Iron Ore

https://www.riotinto.com/products/iron-ore

Pilbara, Western Australia
Iron Ore

We produce five iron ore products in Western Australia – including the Pilbara Blend™, the world’s most recognised brand of iron ore.

17
Iron ore mines

~2,000km
Rail network span

$9.8bn
Underlying EBITDA in H1 2023

4
Port terminals

5
Mainstream iron ore products

69%
EBITDA margin in H1 2023
## Iron Ore

### Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>H1 2023</th>
<th>H1 2022 comparison</th>
<th>2023 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segmental revenue</td>
<td>15.6</td>
<td>-6%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>9.8</td>
<td>-6%</td>
<td></td>
</tr>
<tr>
<td>Margin (FOB)(^3)</td>
<td>69%</td>
<td>-1pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>6.8</td>
<td>-20%</td>
<td></td>
</tr>
<tr>
<td>Capex</td>
<td>1.1</td>
<td>-26%</td>
<td>Sustaining -$1.5(^3)</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>5.6</td>
<td>-20%</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>63%</td>
<td>-9pp</td>
<td></td>
</tr>
<tr>
<td>Average realised price(^1,2) ($/t)</td>
<td>107.2</td>
<td>-11%</td>
<td></td>
</tr>
<tr>
<td>Unit cost(^2,3) ($/t)</td>
<td>21.2</td>
<td>-3%</td>
<td>21.0-22.5</td>
</tr>
</tbody>
</table>

### Shipments\(^3\) (Mt, 100% basis)

<table>
<thead>
<tr>
<th></th>
<th>2023 guidance</th>
<th>H1 2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilbara Blend</td>
<td>105.5</td>
<td>203.9</td>
<td>202.9</td>
<td>232.7</td>
<td>228.1</td>
<td>245.4</td>
<td></td>
</tr>
<tr>
<td>Robe Valley</td>
<td>13.1</td>
<td>25.5</td>
<td>25.2</td>
<td>30.3</td>
<td>27.4</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Yandicoogina</td>
<td>26.2</td>
<td>56.9</td>
<td>56.9</td>
<td>57.7</td>
<td>57.1</td>
<td>57.4</td>
<td></td>
</tr>
<tr>
<td>SP10</td>
<td>16.8</td>
<td>35.4</td>
<td>36.6</td>
<td>9.9</td>
<td>14.8</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>320-335</td>
<td>161.7</td>
<td>321.6</td>
<td>321.6</td>
<td>330.6</td>
<td>327.4</td>
<td>338.2</td>
</tr>
</tbody>
</table>

\(^1\)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
A global portfolio with products for today and tomorrow

Unrivalled global resource portfolio

Strategic differentiators

Pilbara Infrastructure

Joint Venture Partnerships

Scale & Resilience

Product Grade Spread

Resources for a compelling product suite

Global Mineral Resources & Ore Reserves

Billions of dry tonnes, published grades

<table>
<thead>
<tr>
<th>Resources exclusive of Reserves</th>
<th>Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt;61% Fe)</td>
<td>12</td>
</tr>
<tr>
<td>Mid (61-65% Fe inclusive)</td>
<td>13</td>
</tr>
<tr>
<td>High (&gt;65% Fe)</td>
<td>5</td>
</tr>
</tbody>
</table>

Pilbara
Pilbara Blend
Green steel application pathways

Iron Ore Company of Canada
High-grade, low-impurity products with
Direct Reduction Iron market presence

Simandou
Blast furnace feed or Direct
Reduction Iron products

China Portside
Global blending capability providing
greater customer access

1 See supporting references for categorisation of Rio Tinto’s Mineral Resources and Ore Reserves on slide 3
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
Performance uplift across early SPS deployments

↑ 6% at deployed sites
   Employee satisfaction

↓ Up to 46% improvement at deployed sites
   All-injury frequency rate

<table>
<thead>
<tr>
<th>Tom Price</th>
<th>Brockman 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ 19%</td>
<td>↑ 33%</td>
</tr>
<tr>
<td>AHS equipment utilisation</td>
<td>Weekly total material movement</td>
</tr>
<tr>
<td>↑ 14%</td>
<td>↑ 9%</td>
</tr>
<tr>
<td>HG production daily rate</td>
<td>Monthly Production from baseline</td>
</tr>
</tbody>
</table>

2021
Pilots at West Angelas, Yandicoogina

2022
2 full deployments at Tom Price & Brockman 4

2023
Further deployments across mines, rail, ports & ops centre

Deliver up to 5Mt production uplift in 2023
We are delivering an improved mine portfolio that maximises Pilbara Blend

**Mine Capital Intensity**

(US$ / tpa)

- Gudai-Darri
- Western Range (Greater Paraburdoo)
- Robe Valley
- Deposit C/D (West Angelas)
- Hope Downs 1 Sustaining
- Brockman 4 Sustaining
- Greater Nammuldi Sustaining

**Shipments by Product**

(%)  

- Pilbara Blend
- SP10
- Robe Valley + Yandi

- **2019**: 69
- **2022**: 65
- **Medium Term Target**: 68-74

1Hope Downs 1 sustaining includes Bedded Hilltop and Hope Downs 2  
2Brockman 4 sustaining includes Brockman Syncline 1
Western Range represents our first co-designed mine with Traditional Owners

**Strong ties with China’s leading steel maker**
Agreed new Western Range JV with China Baowu Steel Group (Baowu, 46%)

**Strengthen Pilbara Blend**
25Mt/a of Pilbara Blend process capacity through the Paraburdoo mining hub with first ore in 2025

**Tier 1 asset**
High grade 165Mt @ 62.0% Fe, leveraging existing infrastructure with low-cost mining

---

Cultural heritage protected
Significant sites identified by the Yinhawangka Traditional Owners are protected

Impact minimised
Rigorous and ongoing consultation informed mine designs and infrastructure layout

Return to Country commitments
Integrated closure planning and progressive rehabilitation to limit the development footprint

---

1 See supporting references at Slide 3
Rhodes Ridge will underpin our competitive position for decades to come

Large, high grade and compact

Iron Ore Resources and Reserves

<table>
<thead>
<tr>
<th>Resources</th>
<th>Area (km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhodes Ridge (Australia)</td>
<td>6.7Bt @ 61.6% Fe</td>
</tr>
<tr>
<td>Simandou Blocks 3 &amp; 4 (Guinea)</td>
<td>2.8Bt @ 65.5% Fe</td>
</tr>
<tr>
<td>Carajas (Brazil)</td>
<td>2.9Bt Resource at 62.8% Fe, 6.1Bt Reserve at 65.8% Fe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
<th>Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhodes Ridge (Low Phos Brockman)</td>
<td>6.1Bt Reserve at 65.8% Fe</td>
</tr>
</tbody>
</table>

Perfect for Pilbara Blend

Impurities

Iron Grade

1 See supporting references at Slide 3
2 Rio Tinto owns 45.05% of Simandou Blocks 3 and 4, which contains a Mineral Resource of 2.8Bt at 65.5% Fe. Simandou Blocks 1 & 2 are owned by Winning Consortium Simandou (WCS). UBS ‘Global Research and Evidence Lab’ dated 25 May 2022 estimated Mineral Resource of ~2.7Bt and Ore Reserve of ~1.8Bt at 65.5% Fe.
3 Based on publicly reported data. Vale’s Carajas Resource (Northern System) is sourced from the Form 20-F as filed with the Securities and Exchange Commission on April 14, 2022. Vale reports Mineral Resources exclusive of Ore Reserves and therefore exclusive Mineral Resources have been shown with Ore Reserves for visual comparison purposes.
System outlook and guidance

2023 Guidance

- Shipments: 320 – 335Mt (100% basis)
- Unit costs: $21.0 - $22.5/t (0.70 A$:US$)
- Sustaining capital: ~$1.5 billion

Mid Term Guidance

- Shipments: 345 - 360Mt (100% basis)

---

1Subject to market and other conditions | 2In the upper half of range
Our journey

**Commissioned:**
Robe Valley & Gudai-Darri

**Partnerships:**
PKKP remedy and co-management agreements
Modernised the Rhodes Ridge JV with Wright Prospecting
Co-designed mine plan with Yinhawangka people for Western Range
JV with Baowu to develop Western Range
Agreements with Yindjibarndi Aboriginal Corporations

**Operational Performance:**
Strong system performance H2
Early benefits of SPS
Ramp up projects

**Social licence:**
Engagement with communities
Everyday Respect progress

**Decarbonsation:**
Initial funding for 100MW Pilbara Coastal Solar

**Operational Performance:**
Wider and deeper SPS rollout
Next tranche of replacement mines

**Decarbonsation:**
Progress toward 1GW

**Most valued Iron Ore business:**
Best operator
Values based performance culture
Diverse product portfolio, positioned for green steel
Deep and enduring partnerships

---

**Achieved**

**Improving**

**Developing**

**Excelling**
Strong Chinese iron ore imports absorbing supply gains

**China's crude steel production (Mt annualised)**

- 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.

**Seaborne Iron Ore supply run rate (Mt annualised)**

### Sources:
- Rio Tinto Market Analysis
- NBS
- Kpler
- S&P Global
Investment in the Pilbara, with the backdrop of inflationary and market pressures on prices

- Increase from 2021 primarily due to input price escalation and includes investment to support the ramp-up at Gudai-Darri and targeted investment in pit health and asset maintenance across the Pilbara

- 2023 unit cost guidance range of $21.0 to $22.5/t excluding COVID-19 includes:
  - Ramp-up of Gudai-Darri
  - Continued focus on asset integrity and management of controllable cost base
  - Some volume benefits
  - A$:US$ exchange rate of 0.70
Iron Ore
Sustained improvement in operational performance

Underlying EBITDA H1 2023 vs H1 2022
$m

<table>
<thead>
<tr>
<th></th>
<th>H1 2022 underlying EBITDA</th>
<th>Price</th>
<th>Exchange rates</th>
<th>Energy</th>
<th>Inflation</th>
<th>Flexed H1 2022 underlying EBITDA</th>
<th>Volumes and Mix</th>
<th>Cash costs</th>
<th>Other¹</th>
<th>H1 2023 underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlying EBITDA H1 2022</td>
<td>10,395</td>
<td>(1,248)</td>
<td>174</td>
<td>(1)</td>
<td>(113)</td>
<td>9,207</td>
<td></td>
<td></td>
<td></td>
<td>9,792</td>
</tr>
</tbody>
</table>

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

https://www.riotinto.com/products/aluminium
Aluminium

Lightweight and infinitely recyclable, the carbon footprint from our global aluminium operations is 60% below industry average.

4 Bauxite mines
14 Smelters
$1.1bn Underlying EBITDA in H1 2023
21% EBITDA margin in H1 2023

In Canada, operations in the 1st decile of the cost curve
Aluminium

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

<table>
<thead>
<tr>
<th>Production (Mt, Rio Tinto share)</th>
<th>2023 guidance</th>
<th>H1 2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bauxite</td>
<td></td>
<td></td>
<td>25.6</td>
<td>54.6</td>
<td>54.3</td>
<td>56.1</td>
<td>55.1</td>
</tr>
<tr>
<td>Alumina</td>
<td></td>
<td></td>
<td>3.7</td>
<td>7.5</td>
<td>7.9</td>
<td>8.0</td>
<td>7.7</td>
</tr>
<tr>
<td>Aluminium</td>
<td></td>
<td></td>
<td>1.6</td>
<td>3.0</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>

\(^1\) LME plus all-in premiums (product and market)  
\(^2\) Platts Alumina PAX FOB Australia

* In the lower end of the range
Finding better ways to provide the materials the world needs
Growing our North American aluminium business

AP60 aluminium smelter\(^1\) investing $1.1bn

Casthouse expansions Arvida, Alma

Matalco joint venture
Launching into recycled aluminium supply

\(^1\)AP60 technology generates approximately 1.6 tonnes of CO\(_2\)e per tonne of aluminium produced, compared to approximately 3.2 tonnes of CO\(_2\)e per tonne of aluminium for the Arvida smelter’s current technology, and over 12 tonnes of CO\(_2\)e per tonne of aluminium for the industry average
Decarbonisation to drive demand for metals

Solar energy contribution to aluminium demand (%)

Global EV sales

Source: Rio Tinto Market Analysis, CRU, CPIA, BNEF
Privileged low-carbon hydro resources in North America

Global aluminum production by energy source

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Mt</th>
<th>Average carbon intensity(^1) (t CO(_2)/t Al)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self gen Hydro</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>1.7</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>3.9</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
<td>2</td>
</tr>
<tr>
<td>Grid Hydro(^2)</td>
<td>6.0</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>2</td>
</tr>
<tr>
<td>Grid Mixed</td>
<td>4.3</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
<td>9</td>
</tr>
<tr>
<td>Gas</td>
<td>6.1</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>8</td>
</tr>
<tr>
<td>Coal</td>
<td>5.4</td>
<td>31.1</td>
</tr>
<tr>
<td></td>
<td>31.1</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>16</td>
</tr>
</tbody>
</table>

World average carbon intensity\(^1\) (t CO\(_2\)/t Al) 12
RTA average carbon intensity\(^1\) (t CO\(_2\)/t Al) 5

2023 global aluminium smelters energy cost curve

1. Scope 1 and 2 emissions for aluminium smelting only
2. RT grid hydro including JVs in Canada & New Zealand, plus Bell Bay and ISAL
Sources: Rio Tinto, CRU
Current market conditions are short term and cyclical

Smelter operating margin and global inventories as weeks of consumption
75th percentile smelter margin, 2022 $/t, 2000-2022 monthly data

Raw materials are high this cycle in relation to LME
Carbon materials and caustic soda costs as percentage of aluminium and alumina prices respectively at typical usage rates

Sources: Rio Tinto Market Analysis, CRU, LME, Rio Tinto Market Analysis, CRU. Grey dots denote Global Financial Crisis
Sustainable competitive advantage through the cycle

Short-term and cyclical market conditions

1. Grow North America low-carbon aluminium
2. Repower Pacific Aluminium smelters
3. Maintain options for third-party bauxite sales
4. Optimise integrated alumina supply chain

Four Lenses
To think strategically and tactically about our aluminium business

Best Operator
Recovery plans | SPS & Productivity | People & Leadership
Best Operator focus to protect margins and unlock growth

**Alma**
Stable performance and continuous production creep

**Production**
Kt, Rio Tinto equity share

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production (Kt)</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
<td>450</td>
</tr>
</tbody>
</table>

1.0% CAGR

**Safe Production System**

- Implementation of best practice rituals focused on operations and asset management
- Reduction of aborted casting events
- Optimisation of casting furnace filling time reducing delays in casting process
- Rolling out end-to-end implementation across Quebec
Returning Boyne and Kitimat to Best Operator

**Boyne smelter**

**Production**
Kt, Rio Tinto equity share

- Complete line 3 recovery
- Restore overall asset health
- Re-establish technical capability

**Kitimat**

**Production**
Kt, Rio Tinto equity share

- Complete pots restart in 2023
- Stabilise and return to best performance in 2024
- Complete workforce transformation
Playing a bigger role in North America's energy transition

**Largest mining and metal producer in North America**
Copper equivalent basis, 2021 actual production*

<table>
<thead>
<tr>
<th>Company</th>
<th>Aluminium</th>
<th>Other Minerals &amp; Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Tinto</td>
<td></td>
<td>1.5M</td>
</tr>
<tr>
<td>Freeport</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Nutrien</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Agnico Eagle</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Newmont</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Barrick</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Alcoa</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>The Mosaic Company</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Teck</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Glencore</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Vale</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Cleveland-Cliffs</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Kinross</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>ArcelorMittal</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Century Aluminum</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>US Steel</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Grupo Mexico</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Newcrest</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Sibanye-Stillwater</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>K+S Group</td>
<td></td>
<td>0.5M</td>
</tr>
<tr>
<td>Champion Iron</td>
<td></td>
<td>0.5M</td>
</tr>
</tbody>
</table>

* 2021 production in the USA and Canada, aggregated by producing company in copper equivalent terms using long-run consensus prices, for the following minerals and metals: alumina, aluminium, cobalt, copper, gold, iron ore, lead, molybdenum, nickel, palladium, platinum, potash, silver and zinc.

**Rio Tinto has the foundation to grow in North America**

- Well-positioned industrial sites forming an integrated value chain
- Unparalleled hydropower and port infrastructures
- Deep customer relationships across aluminium, copper, high grade iron ore, titanium, battery materials and critical minerals
- Strong government partnerships
- Deep technological and R&D capability (Sorel, Saguenay, Salt Lake City)
Our aluminium journey

**Commissioned:**
Laterrière recycling furnace

**Under construction:**
ELYSIS 450kA cells

**Committed investments:**
Arvida recycling centre
Alma billet expansion

**New low-carbon partnerships:**
Ford and Volvo MoU
AB InBev – Corona / ELYSIS

**Operational performance:**
Kitimat and Boyne recoveries
Alumina refineries stabilisation
SPS deployment

**Social licence:**
Partnerships with governments
and First Nations

**Development:**
Capital intensity

**Low-carbon growth:**
AP60 expansion
Unlocking green energy
ELYSIS deployment model

**Decarbonisation:**
Boyne repowering
Alumina new technology pilots

**Industry leadership:**
Industry leader in providing the green aluminium our customers need, with favourable position in the North American market

---

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

Underlying EBITDA H1 2023 vs H1 2022
$m

<table>
<thead>
<tr>
<th>Component</th>
<th>H1 2022 underlying EBITDA</th>
<th>H1 2023 underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>(1,341)</td>
<td>101</td>
</tr>
<tr>
<td>Exchange rates</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>(105)</td>
<td>1,537</td>
</tr>
<tr>
<td>Inflation</td>
<td>(91)</td>
<td>(290)</td>
</tr>
<tr>
<td>Flexed H1 2022 EBITDA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volumes &amp; Mix</td>
<td>(76)</td>
<td></td>
</tr>
<tr>
<td>Cash costs</td>
<td>(92)</td>
<td></td>
</tr>
<tr>
<td>One-offs</td>
<td></td>
<td>1,140</td>
</tr>
<tr>
<td>Other1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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1 Other includes Non-cash costs and Exploration & Evaluation expense
### Composition of alumina and aluminium production costs

#### Production cash costs (alumina refining)

<table>
<thead>
<tr>
<th>FY 2021</th>
<th>H1 2021</th>
<th>H2 2021</th>
<th>FY 2022</th>
<th>H1 2022</th>
<th>H2 2022</th>
<th>H1 2023</th>
<th>H2 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>13%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Caustic</td>
<td>14%</td>
<td>12%</td>
<td>15%</td>
<td>23%</td>
<td>22%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Bauxite</td>
<td>39%</td>
<td>41%</td>
<td>37%</td>
<td>31%</td>
<td>32%</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>Conversion</td>
<td>34%</td>
<td>34%</td>
<td>34%</td>
<td>32%</td>
<td>33%</td>
<td>32%</td>
<td>32%</td>
</tr>
</tbody>
</table>

#### Input Costs

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

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

#### Input Costs

<table>
<thead>
<tr>
<th>Input</th>
<th>H1 2021 Index Price</th>
<th>H2 2021 Index Price</th>
<th>H1 2022 Index Price</th>
<th>H2 2022 Index Price</th>
<th>H1 2023 Index Price</th>
<th>Inventory Flow</th>
<th>FY23 Annual Cost Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina</td>
<td>288 $/t</td>
<td>369 $/t</td>
<td>395 $/t</td>
<td>328 $/t</td>
<td>349 $/t</td>
<td>1 - 2 months</td>
<td>$64m per $10/t</td>
</tr>
<tr>
<td>Petroleum Coke</td>
<td>373 $/t</td>
<td>491 $/t</td>
<td>695 $/t</td>
<td>719 $/t</td>
<td>636 $/t</td>
<td>2 - 3 months</td>
<td>$11m per $10/t</td>
</tr>
<tr>
<td>Coal Tar Pitch</td>
<td>748 $/t</td>
<td>818 $/t</td>
<td>1103 $/t</td>
<td>1476 $/t</td>
<td>1399 $/t</td>
<td>1 - 2 months</td>
<td>$2m per $10/t</td>
</tr>
</tbody>
</table>

5. LME Australia
6. US Gulf (FOB)
7. North AM (FOB)
As the result of Queensland Alumina Limited's (QAL) activation of a step-in process following sanction measures by the Australian Government, we have taken on 100% of capacity for as long as the step-in continues. We are using Rusal's 20% share of capacity under the tolling arrangement with QAL. This additional output is excluded from our production results as QAL remains 80% owned by Rio Tinto and 20% owned by Rusal. The above values represent 100% of capacity.
Copper

https://www.riotinto.com/products/copper

Oyu Tolgoi underground, Mongolia
Copper

Kennecott and Oyu Tolgoi operations are the first and second copper mines in the world to be awarded Copper Mark – the industry’s responsible production assurance programme.

3

Copper operations

1

High-grade iron ore growth project in Guinea

$1.1bn

Underlying EBITDA in H1 2023

3

Growth projects in US, Australia & Mongolia

1st & 2nd

Copper mines in the world awarded Copper Mark

43%

EBITDA margin in H1 2023

Rio Tinto
## Copper

### Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>H1 2023</th>
<th>H1 2022 comparison</th>
<th>2023 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segmental revenue</td>
<td>3.5</td>
<td>-2%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>1.1</td>
<td>-29%</td>
<td></td>
</tr>
<tr>
<td>Margin (integrated operations)</td>
<td>43%</td>
<td>-11pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>0.4</td>
<td>-63%</td>
<td></td>
</tr>
<tr>
<td>Capex (excl. EAUs)</td>
<td>0.9</td>
<td>+26%</td>
<td></td>
</tr>
<tr>
<td>Free cash flow</td>
<td>(0.5)</td>
<td>-45%</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE¹</td>
<td>4%</td>
<td>-6pp</td>
<td></td>
</tr>
<tr>
<td>Copper realised price²</td>
<td>396</td>
<td>-11%</td>
<td></td>
</tr>
<tr>
<td>Unit cost³</td>
<td>184c/lb</td>
<td>+24%</td>
<td>180-200</td>
</tr>
</tbody>
</table>

### Production (Mt, Rio Tinto share)

<table>
<thead>
<tr>
<th></th>
<th>2023 guidance</th>
<th>H1 2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mined copper⁴</td>
<td>590 to 640</td>
<td>290</td>
<td>521</td>
<td>494</td>
<td>528</td>
<td>577</td>
<td>608</td>
</tr>
<tr>
<td>Refined copper</td>
<td>160 to 190</td>
<td>95</td>
<td>209</td>
<td>202</td>
<td>155</td>
<td>260</td>
<td>275</td>
</tr>
</tbody>
</table>

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 utilise 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.
On-track for 1Mt of mined copper production within 5 years, with more than 80% of the growth capital already spent

Well-endowed portfolio of assets

Ownership interest in 4 large world class ore bodies:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Ownership</th>
<th>Mine life</th>
<th>Ore Reserves</th>
<th>Mineral Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escondida</td>
<td>30%</td>
<td>2070+</td>
<td>6.7Bt @ 0.59% Cu</td>
<td>19.3Bt @ 0.50% Cu</td>
</tr>
<tr>
<td>Oyu Tolgoi</td>
<td>66%</td>
<td>2070+</td>
<td>1.1Bt @ 0.87% Cu</td>
<td>4.4Bt @ 0.69% Cu</td>
</tr>
<tr>
<td>Resolution</td>
<td>55%</td>
<td>2070+</td>
<td>-</td>
<td>1.9Bt @ 1.52% Cu</td>
</tr>
<tr>
<td>La Granja</td>
<td>45%</td>
<td>2070+</td>
<td>-</td>
<td>4.32Bt @ 0.51% Cu</td>
</tr>
</tbody>
</table>

1Source: Rio Tinto 2022 annual results presentation, February 2023.
2See supporting references for the 500ktpa copper target and Escondida, Oyu Tolgoi, Resolution and La Granja Mineral Resources and Ore Reserves categorisation and reporting on slide 3.
3Anticipated mine life is based on currently reported Ore Reserves and Mineral Resources tonnes projected at predicted annual capacity.

- Oyu Tolgoi underground ramp-up on track to deliver over 500ktpa as a world class Tier 1 asset
- Oyu Tolgoi has multiple expansion options
- Well positioned to support US energy transition
  - Kennecott expansion pathways (underground and open pit)
  - Revival of US copper position, Resolution in established Arizona copper triangle
- Nuton bioleaching could unlock substantial volumes with ~80% recoveries
  - La Granja joint venture with First Quantum
  - Winu is a promising project in the Paterson region of Western Australia
Oyu Tolgoi: Set to triple copper production

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

<table>
<thead>
<tr>
<th>Metrics1,2</th>
<th>Unit</th>
<th>2022 Act</th>
<th>2023 - 2027</th>
<th>2028 - 2036</th>
<th>LOM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore processed</td>
<td>Mt</td>
<td>39</td>
<td>40</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>Head grade (Cu)</td>
<td>%</td>
<td>0.42</td>
<td>0.97</td>
<td>1.28</td>
<td>0.82</td>
</tr>
<tr>
<td>Recovery (Cu)</td>
<td>%</td>
<td>80</td>
<td>87</td>
<td>90</td>
<td>84</td>
</tr>
<tr>
<td>Concentrate volume</td>
<td>dmt</td>
<td>616</td>
<td>1,078</td>
<td>1,608</td>
<td>1,010</td>
</tr>
<tr>
<td>Concentrate grade (Cu)</td>
<td>%</td>
<td>21</td>
<td>31</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>Copper production</td>
<td>Kt</td>
<td>130</td>
<td>~340</td>
<td>~500</td>
<td>~290</td>
</tr>
<tr>
<td>Gold production</td>
<td>Koz</td>
<td>184</td>
<td>~360</td>
<td>~330</td>
<td>~260</td>
</tr>
</tbody>
</table>
Oyu Tolgoi: Expect to turn free cash flow positive after significant investment

<table>
<thead>
<tr>
<th></th>
<th>2023 – 2025 (3 years)</th>
<th>2026 – 2029 (4 years)</th>
<th>2030 – 2033 (4 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross Revenue</strong></td>
<td>1.5 – 2.9</td>
<td>3.8 – 4.6</td>
<td>4.2 – 5.1</td>
</tr>
<tr>
<td><strong>Development Capex</strong></td>
<td>0.5 – 0.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Sustaining Capex</strong></td>
<td>0.5 – 0.6</td>
<td>0.3 – 0.4</td>
<td>0.2 – 0.3</td>
</tr>
<tr>
<td><strong>Opex</strong></td>
<td>0.9 – 1.1</td>
<td>1.0 – 1.2</td>
<td>1.0 – 1.2</td>
</tr>
</tbody>
</table>

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 capex 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

<table>
<thead>
<tr>
<th>Project finance(^1)</th>
<th>Shareholder funds(^2)</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.9b</td>
<td>$7.7b</td>
<td>$4.2b</td>
</tr>
</tbody>
</table>

### Participants

<table>
<thead>
<tr>
<th>Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-loan</td>
</tr>
<tr>
<td>Export Credit Agency</td>
</tr>
<tr>
<td>Export Credit Agency</td>
</tr>
<tr>
<td>Export Credit Agency</td>
</tr>
<tr>
<td>B-loan (70%)</td>
</tr>
<tr>
<td>MIGA-insured (30%)</td>
</tr>
<tr>
<td>Total Commercial Loans (100%)</td>
</tr>
</tbody>
</table>

### 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.
Copper
Margins remain robust despite 10% decline in LME price

Underlying EBITDA H1 2023 vs H1 2022
$m

- H1 2022 underlying EBITDA: $1,534
- Price: -$163
- Exchange rates: -$4
- Energy: -$33
- Inflation: -$47
- Flexed H1 2022 underlying EBITDA: $1,287
- Volumes & Mix: $78
- Cash costs: $293
- Other¹: $10
- H1 2023 underlying EBITDA: $1,082

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

https://www.riotinto.com/products/minerals

Rincon Lithium, Argentina

RioTinto
Minerals

Our products are essential to everyday modern life

6
Mining sites

7
Smelters, refineries and processing plants

$0.7bn
Underlying EBITDA in H1 2023

6
countries

1st
Mining company to be certified by the Responsible Jewellery Council

30%
EBITDA margin in H1 2023
### Minerals

#### Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>H1 2023</th>
<th>H1 2022 comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segmental revenue</td>
<td>2.9</td>
<td>-15%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>0.7</td>
<td>-45%</td>
</tr>
<tr>
<td>Margin (product group operations)</td>
<td>30%</td>
<td>-10 pp</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>0.09</td>
<td>-86%</td>
</tr>
<tr>
<td>Capex</td>
<td>0.3</td>
<td>+13%</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>0.2</td>
<td>-165%</td>
</tr>
<tr>
<td>Underlying ROCE(^2)</td>
<td>13%</td>
<td>-8 pp</td>
</tr>
</tbody>
</table>

#### Production (Rio Tinto share)

<table>
<thead>
<tr>
<th></th>
<th>2023 guidance</th>
<th>H1 2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC (Mt)</td>
<td>10.0-11.0</td>
<td>4.7</td>
<td>10.3</td>
<td>9.7</td>
<td>10.4</td>
<td>10.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Borates – B(_2)O(_3) content (kt)</td>
<td>~0.5Mt</td>
<td>257</td>
<td>532</td>
<td>488</td>
<td>480</td>
<td>520</td>
<td>512</td>
</tr>
<tr>
<td>Titanium dioxide slag (kt)</td>
<td>1.1-1.4Mt(^*)</td>
<td>589</td>
<td>1,200</td>
<td>1,014</td>
<td>1,120</td>
<td>1,206</td>
<td>1,116</td>
</tr>
<tr>
<td>Diamonds(^1) (kt)</td>
<td>3.0-3.8Mt</td>
<td>1,924</td>
<td>4,651</td>
<td>3,847</td>
<td>3,731</td>
<td>4,031</td>
<td>4,358</td>
</tr>
</tbody>
</table>

\(^*\) 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.
We are decarbonising through partnerships and innovation in Canada

Partnering with the Government of Canada to decarbonise RTIT Quebec Operations and boost critical minerals processing

C$737 million investment over eight years

Innovating to find new ways to deliver the emerging materials the world needs

First producer of high-quality scandium oxide in North America

Chief Executive Jakob Stausholm, Prime Minister of Canada Trudeau, Sophie Bergeron (MD RTIT & Diamonds) and Minister Champagne at the Blue Smelting construction site

Rio Tinto Iron and Titanium Quebec Operations
Minerals
Challenging market conditions; forest fires at IOC impact production

Underlying EBITDA H1 2023 vs H1 2022
$m

<table>
<thead>
<tr>
<th></th>
<th>H1 2022 underlying EBITDA</th>
<th>Price</th>
<th>Exchange rates</th>
<th>Energy</th>
<th>Inflation</th>
<th>Flexed H1 2022 underlying EBITDA</th>
<th>Volumes and Mix</th>
<th>Cash costs</th>
<th>Other¹</th>
<th>H1 2023 underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,259</td>
<td>(197)</td>
<td>(21)</td>
<td>(21)</td>
<td>1,094</td>
<td>74</td>
<td>(100)</td>
<td>(221)</td>
<td>(84)</td>
<td>689</td>
</tr>
</tbody>
</table>

¹Other includes Non-cash costs and Exploration & Evaluation expense
Maximising the value of our physical flows to improve both our business and that of our customers

- ~2,000 Customers
- 230+ ships
  - Contracted and owned ships under management at any one time, including 17 owned by Rio Tinto
- 20,000+ Active suppliers
- 2,600 Sea voyages in 2022
Exploring for

7 commodities in 18 countries

$897m

Spent on exploration and evaluation in 2022

400+

explorers

Key exploration projects

In Australia, Colombia, Namibia, Peru, the US and Zambia
Rio Tinto

Innovation
A strong global R&D footprint…
…complemented by partnerships
Disciplined technology roadmap

**Health & Safety**
- 9 projects
- Reducing frontline exposure to hazards
- Managing health and wellbeing of our people

**ESG**
- 19 projects
- Reducing water consumption
- Improving water treatment
- Dry tailings
- Dry processing
- Closure

**Growth**
- 32 projects
- Discovering new orebodies
- Reducing capital intensity
- Creating new revenue streams

**Carbon**
- 21 projects
- Green steel and low carbon products
- Storage options
- Green processing
- Green energy
- Green fleet

**Productivity**
- 54 projects
- Maximise value from each ore body
- Equipment utilisation
- Automation
- Energy efficiency

---

**Impeccable ESG credentials**

**Excel in Development**

**Best Operator**

**Social Licence**

---

Rio Tinto
Transition and the global energy mix

- **Next ~10 yrs**
  - Wind and solar

- **2030-2035**
  - Thermal and mechanical energy storage for renewables firming

- **2035-2045**
  - Breakthrough batteries and small modular reactors

- **2045+**
  - Fusion
Firming and storage options

**Mechanical**

Electro-mechanical storage has the scale required by our operations, but capex and low Round Trip Efficiency (RTE) makes these solutions very expensive.

**Electrochemical**

Lithium-Ion Batteries are not practically scalable above 8hrs of stored energy, hence they will not be suitable for 24/7 firming solutions required by our operations.

**Thermal**

Electricity to heat solutions provide a scalable option at a low capex and very high RTE.

In the short term, firming of renewable electricity will have to come from conventional power sources like Hydro, Gas Turbine and Nuclear which are more cost effective, or we can revert to flexible demand management from our assets, eg a FlexPower Aluminium smelter.

An ideal solution for our alumina refineries, and other hydrometallurgical plants.
Hydrogen requires abundant low-cost green energy and lower capital costs

Rio Tinto investment in Electric Hydrogen start-up to lower cost of hydrogen

Potential hydrogen uses:
- Reductant for zero-carbon steel making
- Ilmenite reduction at RTIT and RBM
- Fuel for calcining in our alumina refineries

Currently uneconomic, as well as energy and capital intensive

Competitive green hydrogen will need very low-cost green electricity at scale and lower capital costs

Hydrogen leakage: ~1% per day of hydrogen is lost when stored in liquid form – global warming potential 5-16x that of CO₂ driving the production of hydrogen close to its point of use

Fleet electrification will require time and technology breakthroughs

<table>
<thead>
<tr>
<th>Current state</th>
<th>Drill</th>
<th>Charge</th>
<th>Dozer</th>
<th>Loader</th>
<th>Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel fuel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2022-2035 Biodiesel and biofuels

<table>
<thead>
<tr>
<th>Trial stage 2024</th>
<th>Drill</th>
<th>Charge</th>
<th>Dozer</th>
<th>Loader</th>
<th>Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early deployment 2026</td>
<td>Drill</td>
<td>Charge</td>
<td>Dozer</td>
<td>Loader</td>
<td>Truck</td>
</tr>
</tbody>
</table>

2028-2045 Electrification

<table>
<thead>
<tr>
<th>At scale</th>
<th>Drill</th>
<th>Charge</th>
<th>Dozer</th>
<th>Loader</th>
<th>Truck</th>
</tr>
</thead>
</table>

- Diesel
- Cable power
- Battery Electric
Breakthrough technologies create new revenue streams

Green aluminium
Apple has used the world's first aluminium from zero carbon smelting at an industrial scale ELYSIS cell. AP4X amperage increase implementation at the Alma smelter resulted in a 2.7% increase in production of low carbon aluminium.

Critical minerals from waste
Scandium production at RTIT Quebec Operations from spent acid stream.
Tellurium production at Kennecott delivering a new domestic supply to the US Solar industry.
Spodumene concentrate produced at RTIT Quebec Operations.

Processing waste
Copper from waste
Nuton and related sulphide leaching technology targeting legacy copper waste and traditional orebodies with detrital challenges.
Commercialising through strategic partnerships in the Americas.

Carbon mineralisation
Storing carbon as rock
Rio Tinto-led team exploring carbon storage potential at the Tamarack nickel joint venture in central Minnesota.
Green steel pathways: range of potential technology options available

---

**Estimated time to Commercial Scale**

<table>
<thead>
<tr>
<th>Options</th>
<th>Time to Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF-BOF Optimisation</td>
<td>1-20 years</td>
</tr>
<tr>
<td>Nat Gas DRI/HBI Shaft</td>
<td>Today</td>
</tr>
<tr>
<td>H₂ DRI/HBI Shaft</td>
<td>5-10 years</td>
</tr>
<tr>
<td>H₂ DRI/HBI Fluidised Bed</td>
<td>5-20 years</td>
</tr>
<tr>
<td>H₂ DRI + Melter</td>
<td>10-20 years</td>
</tr>
<tr>
<td>Biomass (BioIron™)</td>
<td>10-20 years</td>
</tr>
<tr>
<td>Electrolysis</td>
<td>20-40 years</td>
</tr>
<tr>
<td>BF + CCUS</td>
<td>10-20 years</td>
</tr>
<tr>
<td>Scrap-EAF</td>
<td>Today</td>
</tr>
</tbody>
</table>

**CO₂e (/tLS) (using renewable power)**

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>0.4</th>
<th>0.8</th>
<th>1.2</th>
<th>1.6</th>
<th>2.0</th>
<th>2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Optimised</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>58</td>
<td>60</td>
<td>62</td>
<td>64</td>
<td>66</td>
<td>68</td>
</tr>
</tbody>
</table>

**Ore Suitability**

<table>
<thead>
<tr>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>56</td>
</tr>
</tbody>
</table>

---

**Rio Tinto**

---
Our technology journey

**Achieved**

- Creation of Chief Scientist’s Office – driving R&D integration and delivery across the company
- One of the largest and most balanced technology and R&D portfolios in the mining industry
- Leading on automation and remote operations
- First producer of zero carbon aluminium from ELYSISTM and first scandium producer in North America

**Improving**

- Growing capabilities in battery materials
- Biodiesel and biofuels for our mobile fleet
- Introduction of smaller and more efficient equipment at mine sites – eg automated road-sized trucks
- Partnering to support the production of zero carbon steel

**Developing**

- Ramp-up of solar and wind deployment to meet an increasing proportion of our electricity needs
- Battery electric haul trucks
- Accelerating ELYSISTM, NutonTM, and production of Lithium and critical materials
- Storing CO₂ in rock through carbon mineralisation

**Excelling**

- Providing firmed zero carbon energy to support 24/7 operational needs
- Innovation leader in providing materials produced with a zero carbon and superior ESG footprint to drive the energy transition
- Being fastest to translate new ideas into sustained business value
Rio Tinto

Financial information & policies
Shareholder returns policy

Balanced capital allocation

<table>
<thead>
<tr>
<th>Maintain an appropriate balance between:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Investment in compelling growth projects</td>
</tr>
<tr>
<td>- Total shareholder cash returns of 40-60% of underlying earnings through the</td>
</tr>
<tr>
<td>cycle</td>
</tr>
</tbody>
</table>

Supplement ordinary dividends with additional returns in periods of strong
earnings and cash generation

Balance between interim and final to be weighted towards the final dividend

Board to determine appropriate ordinary dividend per share, taking into account:

- Results for the financial year
- Outlook for our major commodities
- View on the long-term growth prospects
- Objective of maintaining a strong balance sheet

riotinto.com/invest/shareholder-information
# Credit rating*

<table>
<thead>
<tr>
<th></th>
<th>Standard &amp; Poor’s</th>
<th>Moody’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term</td>
<td>A</td>
<td>A1</td>
</tr>
<tr>
<td>Short-term</td>
<td>A-1</td>
<td>P-1</td>
</tr>
<tr>
<td>Outlook</td>
<td>Stable</td>
<td>Stable</td>
</tr>
</tbody>
</table>

*A rating is not a recommendation to buy, sell or hold securities, and may be subject to revision, suspension or withdrawal at any time by the assigning rating agencies*
# Ongoing major capital projects

<table>
<thead>
<tr>
<th>Product group</th>
<th>All numbers on 100% basis (US$)</th>
<th>Approved capital cost</th>
<th>Status as at 30 June 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore</td>
<td>Investment in the Western Range iron ore project, a joint venture between Rio Tinto (54%) and China Baowu Steel Group Co. Ltd (46%) in the Pilbara to sustain production of the Pilbara Blend from Rio Tinto’s existing Paraburdoo hub. First production is anticipated in 2025.</td>
<td>$1.3bn (Rio Tinto share)</td>
<td>Announced in September 2022, the mine will have a capacity of 25 million tonnes per year. The project includes construction of a primary crusher and an 18-kilometre conveyor connection to the Paraburadoo processing plant. Construction continued in line with schedule during the half year to 30 June 2023 with site facilities completed and contractors mobilised, while we progressed bulk earthworks for the fixed plant and pre-strip earthworks for the mine.</td>
</tr>
<tr>
<td>Aluminium</td>
<td>Investment to expand the low-carbon AP60 aluminium smelter at the Complexe Jonquière in Quebec. The investment includes up to $113 million of financial support from the Quebec Government.</td>
<td>$1.1bn</td>
<td>Approved in June 2023, the investment will add 96 AP60 pots, representing 160,000 tonnes of primary aluminium per year, replacing the Arvida smelter which is set to gradually close from 2024. Commissioning is expected in the first half of 2026, with the smelter fully ramped up by the end of that year. Once completed, the smelter is expected to be in the first quartile of the industry operating cost curve.</td>
</tr>
<tr>
<td>Copper</td>
<td>Phase two of the south wall pushback to extend mine life at Kennecott in Utah by a further six years.</td>
<td>$1.8bn</td>
<td>Approved in December 2019, the investment will further extend strip waste rock mining and support additional infrastructure development. This will allow mining to continue into a new area of the orebody between 2026 and 2032. In March 2023, a further $0.3 billion was approved to primarily mitigate the risk of failure in an area of geotechnical instability known as Revere, necessary to both protect open pit value and enable underground development.</td>
</tr>
</tbody>
</table>
## Ongoing major capital projects

<table>
<thead>
<tr>
<th>Product group</th>
<th>All numbers on 100% basis (US$)</th>
<th>Approved capital cost</th>
<th>Status as at 30 June 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>Investment in the Kennecott underground development of the North Rim Skarn (NRS) area.</td>
<td>$0.5bn</td>
<td>Approved in June 2023, production from NRS5 will commence in 2024 and is expected to ramp up over two years, to deliver around 250,000 tonnes of additional mined copper over the next ten years alongside open cut operations.</td>
</tr>
<tr>
<td>Copper</td>
<td>Development of the Oyu Tolgoi underground copper/gold mine in Mongolia (Rio Tinto 66%), which is expected to produce (from the open pit and underground) an average of ~500,000 tonnes of copper per year from 2028 to 2036, compared with 130,000 tonnes in 2022 (open pit).</td>
<td>$7.06bn</td>
<td>The delivery of infrastructure for ramp-up to full capacity remains on target: we expect commissioning of shafts 3 and 4 and the conveyor to surface in the second half of 2024 and the concentrator conversion in the first half of 2025. We delivered first sustainable underground production from Panel 0 in March 2023. A total of 54 drawbells had been opened at 30 June 2023, including 35 in the first half.</td>
</tr>
</tbody>
</table>
## Modelling EBITDA

### Underlying EBITDA sensitivity

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

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.
## Accounting treatment of principal operations

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alumina</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jonquièrè</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Queensland Alumina</td>
<td>80.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Sao Luis (Alumar)</td>
<td>10.0</td>
<td>Brazil</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Yarwun</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Aluminium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alma</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Alouette JV</td>
<td>40.0</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Arvida</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Arvida AP60</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Bécancour</td>
<td>25.1</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Bell Bay</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Boyne Island</td>
<td>59.4</td>
<td>Australia</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Grande Baie</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>ISAL</td>
<td>100.0</td>
<td>Iceland</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Kitimat</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Laterrière</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Sohar</td>
<td>20.0</td>
<td>Oman</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Tiwai Point (NZAS)</td>
<td>79.4</td>
<td>New Zealand</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Tomago</td>
<td>51.6</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td><strong>Salt</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dampier Salt</td>
<td>68.4</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Uranium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Resources of Australia (ERA)</td>
<td>86.3</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Bauxite</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gove</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Porto Trombetas (MRN)</td>
<td>12.0</td>
<td>Brazil</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Sangaredi (note 1)</td>
<td>23.0</td>
<td>Guinea</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Weipa</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Borates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>100.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escondida</td>
<td>30.0</td>
<td>Chile</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Kennecott</td>
<td>100.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Oyu Tolgoi</td>
<td>66.0</td>
<td>Mongolia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Resolution</td>
<td>55.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Diamonds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle Diamonds</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Diavik Diamonds</td>
<td>100.0</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td><strong>TiO₂ feedstocks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTIT mine and smelter</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>QMM mine</td>
<td>80.0</td>
<td>Madagascar</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Richards Bay Minerals</td>
<td>74.0</td>
<td>South Africa</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>
## Accounting treatment of principal operations (cont.)

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron ore</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brockman (2 and 4)</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Eastern Range JV (note 2)</td>
<td>54.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Hope Downs JV (1 and 4)</td>
<td>50.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Iron Ore Company of Canada (IOC)</td>
<td>58.7</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Marandoo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Mt Tom Price</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Nammuldi</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Pannawonica (Mesas J and A)</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Paraburdoo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>West Angelas</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Western Turner Syncline</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Yandicoogina</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>

**Note 1:** Rio Tinto has a 22.95% interest in Sangaredi but benefits from 45% of production, through Halco, which is equity accounted.

**Note 2:** Under the terms of the Eastern Range Joint Venture Agreement, Hamersley Iron manages the operation and is obliged to purchase all production from the JV.

**Note 3:** Rio Tinto recognises 65% of the assets, liabilities, revenues and expenses of Robe River, with a 12% non-controlling interest. The Group therefore has a 53% beneficial interest in the Robe River mines (Mesas J and A and West Angelas).
Principal corporate activity 2010 to 2012

2010
- Sale of majority of Alcan Packaging to Amcor $1,948m
- Sale of Coal & Allied undeveloped properties (Maules Creek and Vickery) – Rio Tinto share $306m
- Sale of Alcan Packaging Food Americas to Bemis Inc $1,200m
- Increase in stake in Ivanhoe Mines to 40.1% $1,591m
- Sale of remaining 48% stake in Cloud Peak Energy $573m

2011
- Increase in stake in Ivanhoe Mines to 42.1% and participation in rights offering $751m
- Increase in stake in Ivanhoe Mines to 46.5% $502m
- Acquisition of Riversdale Mining Ltd (net of cash acquired) $3,690m
- Sale of talc business to Imerys – enterprise value $340m
- Increase in stake in Ivanhoe Mines from 46.5% to 49% $607m
- Increase in holding in Coal and Allied from 75.7% to 80% $266m
- Acquisition of Hathor $536m
- Buy-back of Rio Tinto plc shares (up to 31 December 2011) $5,500m

2012
- Purchase of remaining shares in Hathor $76m
- Increase in stake in Ivanhoe Mines from 49% to 51% $308m
- Buy-back of Rio Tinto plc shares (up to 26 March 2012) $1,500m
- Rio Tinto completes formation of Simandou JV with Chalco $1,350m
- Increase in stake in Richards Bay Minerals from 37% to 74% $1,700m
Principal corporate activity 2013 to 2017

2013
• Sale of Eagle $315m
• Sale of Palabora Mining Corporation $373m
• Sale of Northparkes $820m
• Sale of Altnalmas Gold (held by Turquoise Hill subsidiary) $235m
• Sell-down of interest in Constellium $670m

2014
• Sale of Clermont thermal coal mine $1,015m

2015
• Buy-back of Rio Tinto Limited shares (off-market) $425m
• Buy-back of Rio Tinto Plc shares (ongoing throughout 2015) $1,575m

2016
• Sale of Bengalla thermal coal Joint Venture $617m
• Sale of Mt Pleasant thermal coal project $221m
• Sale of Lochaber aluminium smelter $410m

2017
• Sale of Coal & Allied $2,690m
• Buy-back of Rio Tinto Limited shares (off-market) ~$575m
• Buy-back of Rio Tinto plc shares ~$1,500m
Principal corporate activity 2018 to 2022

2018
- Sale of 82% interest in Hail Creek coking coal mine and 71.2% interest in Valeria coal development project to Glencore $1,700m
- Sale of 75% interest in Winchester South coal development project to Whitehaven Coal Limited $200m
- Sale of 80% interest in Kestrel coking coal mine to consortium comprising EMR Capital and PT Adaro Energy Tbk $2,250m
- Sale of 100% interest in wharf and land in Kitimat to LNG Canada $576m
- Sale of 100% interest in Dunkerque aluminium smelter in France to Liberty House $500m
- Sale of interest in Grasberg mine to Inalum $3,500m
- Buy-back of Rio Tinto plc shares ~$3,300m
- Buy-back of Rio Tinto Limited shares (off-market) ~$2,100m

2019
- Buy-back of Rio Tinto plc shares $1.55bn

2020
- Buy-back of Rio Tinto plc shares $0.2bn

2021
- Entered into a binding agreement to acquire the Rincon lithium project in Argentina from Rincon Mining $825m

2022
- Completed the acquisition of the Rincon lithium project in Argentina $825m
- Completed the acquisition of Turquoise Hill Resource Ltd $3,139m
Shareholder structure  (as at 8 May 2023)

- **23% Rio Tinto Limited**
  Shares outstanding: 0.371bn

- **77% Rio Tinto plc**
  Shares outstanding: 1.247bn

- **100% Rio Tinto DLC**
  Shares outstanding: 1.619bn

[Charts showing geographical distribution of shares]
Rio Tinto Executive Committee

Bold Baatar
Chief Executive
Copper

Alf Barrios
Chief Commercial Officer

Peter Cunningham
Chief Financial Officer

Isabelle Deschamps
Chief Legal Officer,
Governance & Corporate Affairs

Sinead Kaufman
Chief Executive
Minerals

James Martin
Chief People Officer

Arnaud Soirat
Chief Operating Officer

Jakob Stausholm
Chief Executive

Simon Trott
Chief Executive
Iron Ore

Mark Davies
Chief Technical Officer

Kellie Parker
Chief Executive
Australia

Ivan Vella
Chief Executive
Aluminium

riotinto.com/about/executive-committee
Rio Tinto Board of Directors
Dominic Barton BBM – Chair

APPOINTMENT
April 2022 (Board); May 2022 (Chair)

COMMITTEE MEMBERSHIP
Nominations Committee (Chair), People & Remuneration Committee, Sustainability Committee

SKILLS AND EXPERIENCE
Dominic spent over 30 years at McKinsey & Company, including nine years as the Global Managing Partner, and has also held a broad range of public sector leadership positions. He has served as Canada’s Ambassador to China, Chair of Canada’s Advisory Council for Economic Growth, and Chair of the International Advisory Committee to the President of South Korea on National Future and Vision. Dominic brings a wealth of global business experience, including deep insight of geopolitics, corporate sustainability and governance. His business acumen and public sector experience position him to provide balanced guidance to Rio Tinto’s leadership team. Dominic believes in the competitive advantage of putting people at the heart of strategy and the role culture change will play in Rio Tinto’s future success.
Jakob joined Rio Tinto in September 2018 as Executive Director and Chief Financial Officer. He became Chief Executive in January 2021.

As Chief Executive, Jakob brings strategic and commercial expertise and governance experience. He is committed to rebuilding trust with communities, Traditional Owners and engaging broadly with stakeholders, including governments, partners and other business leaders. He continues to focus on improving operational performance, including through the Safe Production System, creating and progressing value-accretive growth options while remaining disciplined on capital allocation and delivering returns for shareholders.

Jakob has over 20 years’ experience, primarily in senior finance roles at Maersk Group and Royal Dutch Shell plc. He was also a Non-Executive Director of Woodside Petroleum and Statoil (now Equinor).
Peter joined Rio Tinto in March 1993 and was appointed Chief Financial Officer and Executive Director in June 2021, after serving as Interim Chief Financial Officer for a short period of time.

As Chief Financial Officer, Peter brings extensive commercial expertise from working across the Group in various geographies. He is strongly focused on the decarbonisation of our assets, investing in the commodities essential for the energy transition, and delivering attractive returns to shareholders while maintaining financial discipline.

During almost three decades with Rio Tinto, Peter has held a number of senior leadership roles, including Group Controller, Chief Financial Officer – Organisational Resources, Global Head of Health, Safety, Environment & Communities, Head of Energy and Climate Strategy, and Head of Investor Relations.
Rio Tinto Board of Directors
Sector experience of Non-Executive Directors

Megan Clark AC
Megan’s experience in the mining and metals industry and in science, research and technology brings valuable insights on sustainable development and innovation to the Board. Previously, she was Head of the Australian Space Agency and Chief Executive of the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Following mining and exploration roles with Western Mining Corporation, Megan was a Director at N M Rothschild and a Vice President Technology at BHP. Megan received the Australian Academy of Science Medal in 2019.

APPOINTMENT
November 2014

COMMITTEE MEMBERSHIP
Sustainability Committee (Chair), Nominations Committee, People & Remuneration Committee

Dean Dalla Valle
Dean brings over four decades of operational and project management experience in the resources and infrastructure sectors. He draws on 40 years’ experience at BHP where he was Chief Commercial Officer, President of Coal and Uranium, President and Chief Operating Officer Olympic Dam, President Cannington, Vice President Ports Iron Ore and General Manager Illawarra Coal. He has had direct operating responsibility in 11 countries, working across major mining commodities and brings a wealth of experience in engaging with a broad range of stakeholders globally, including governments, investors and communities.

APPOINTMENT
June 2023

COMMITTEE MEMBERSHIP
Nominations Committee, Sustainability Committee

Simon Henry
Simon has significant experience in global finance, corporate governance, mergers and acquisitions, international relations, and strategy. He draws on over 30 years’ experience at Royal Dutch Shell plc, where he was Chief Financial Officer between 2009 and 2017.

APPOINTMENT
April 2017

COMMITTEE MEMBERSHIP
Audit & Risk Committee (Chair), Nominations Committee

Kaisa Hietala
Kaisa is an experienced executive with a strong track record of helping companies transform the challenges of environmental megatrends into business opportunities and growth. She began her career in upstream oil and gas exploration and, as Executive Vice President of Renewable Products at Neste Corporation, she played a central role in its commercial transformation into the world’s largest and most profitable producer of renewable products. She was formerly a Board member of Kemira Corporation (2016-2021).

APPOINTMENT
March 2023

COMMITTEE MEMBERSHIP
Nominations Committee, Sustainability Committee
Rio Tinto Board of Directors
Sector experience of Non-Executive Directors

Sam Laidlaw
Sam has more than 30 years’ experience of long-cycle, capital intensive industries in which safety, the low-carbon transition, and stakeholder management are critical. Sam has held a number of senior roles in the energy industry, including as CEO of both Enterprise Oil plc and Centrica plc. He was also a member of the UK Prime Minister's Business Advisory Group.

APPOINTMENT
February 2017, Senior Independent Director (May 2019)

COMMITTEE MEMBERSHIP
People & Remuneration Committee (Chair), Nominations Committee, Sustainability Committee

Susan Lloyd-Hurwitz
Susan brings significant experience in the built environment sector with a global career spanning over 30 years. Most recently Susan was Chief Executive Officer and Managing Director of Mirvac Group for over a decade. Prior to this, she was Managing Director at LaSalle Investment Management, and held senior executive positions at MGPA, Macquarie Group and Lendlease Corporation. Susan is known for her transformational leadership on cultural change, gender equity, diversity and inclusion, and sustainability while at the same time delivering financial results.

APPOINTMENT
June 2023

COMMITTEE MEMBERSHIP
Nominations Committee, People & Remuneration Committee

Simon McKeon AO
Simon brings insights into sectors, including financial services, for purpose, law and government. He practised as a solicitor before working at Macquarie Group for 30 years, including as Executive Chair of its business in Victoria, Australia. Simon served as Chair of AMP Limited, MYOB Limited, and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and was the first President of the Australian Takeovers Panel.

APPOINTMENT
January 2019, Senior Independent Director, Rio Tinto Limited (September 2020)

COMMITTEE MEMBERSHIP
Audit & Risk Committee, Nominations Committee, People & Remuneration Committee

Jennifer Nason
Jennifer has over 37 years’ experience in corporate finance and capital markets. She is the Global Chair of Investment Banking at JP Morgan, based in the US, and for the past 23 years, she has led the Technology, Media and Telecommunications global client practice. During her time at JP Morgan, she has also worked in the metals and mining sector team in Australia and co-founded and chaired the Investment Banking Women’s Network and sits on the Executive Committee for the Investment Bank.

APPOINTMENT
March 2020

COMMITTEE MEMBERSHIP
Nominations Committee, People & Remuneration Committee
Rio Tinto Board of Directors

Sector experience of Non-Executive Directors

**Ngaire Woods CBE**

Ngaire is the founding Dean of the Blavatnik School of Government, Professor of Global Economic Governance and the Founder and Director of the Global Economic Governance Programme at Oxford University. As a recognised expert in public policy, international development and governance, she has served as an adviser to the African Development Bank, the Asian Infrastructure Investment Bank, Commonwealth Heads of Government, the International Monetary Fund and the European Union.

**Ben Wyatt**

Ben had a prolific career in the Western Australian Parliament before retiring in March 2021. He held a number of ministerial positions and became the first Indigenous treasurer of an Australian parliament. His extensive knowledge of public policy, finance, international trade and Indigenous affairs brings valuable insight and adds to the depth of knowledge on the Board. Ben was previously an officer in the Australian Army Reserves, and went on to have a career in the legal profession as a barrister and solicitor.

**APPOINTMENT**
September 2020

**COMMITTEE MEMBERSHIP**
Nominations Committee, People & Remuneration Committee, Sustainability Committee

**APPOINTMENT**
September 2021

**COMMITTEE MEMBERSHIP**
Audit & Risk Committee, Nominations Committee
Board Committees

Audit & Risk Committee
Simon Henry (Chair), Simon McKeon, Ben Wyatt

People & Remuneration Committee
Sam Laidlaw (Chair), Dominic Barton, Megan Clark, Susan Lloyd-Hurwitz, Simon McKeon, Jennifer Nason, Ngaire Woods

Nominations Committee
Dominic Barton (Chair), Megan Clark, Dean Dalla Valle, Simon Henry, Kaisa Hietala, Sam Laidlaw, Susan Lloyd-Hurwitz, Simon McKeon, Jennifer Nason, Ngaire Woods, Ben Wyatt

Sustainability Committee
Megan Clark (Chair), Dean Dalla Valle, Kaisa Hietala, Sam Laidlaw, Ngaire Woods