<table>
<thead>
<tr>
<th>Rio Tinto plc</th>
<th>Rio Tinto Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 St James's Square</td>
<td>360 Collins Street</td>
</tr>
<tr>
<td>London SW1Y 4AD</td>
<td>Melbourne, Victoria 3000</td>
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<tr>
<td>United Kingdom</td>
<td>Australia</td>
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<tr>
<td>T +44 (0)20 7781 2000</td>
<td>T +61 (0)3 9283 3333</td>
</tr>
</tbody>
</table>

[riotinto.com](http://riotinto.com)
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   ▪ Climate change & materials of the future
   ▪ Partnerships / Value chain
4) Markets
5) Iron ore
6) Aluminium
7) Copper
8) Minerals
9) Exploration, Closure, Technical & Projects
10) Financial information & policies / Governance
Our purpose

As pioneers in mining and metals, we produce materials essential to human progress

We are committed to doing so efficiently, effectively and sustainably, creating value for all stakeholders while safeguarding the environment and respecting our host countries and communities.
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
- Titanium dioxide
Our business model

Explore and evaluate
Develop and innovate
Mine and process
Market and deliver
Repurpose and renew
Four areas of immediate focus

Best operator
Expand capability and leadership

Impeccable ESG credentials
Strengthen track record and transparency

Excel in development
Deliver organic & inorganic growth

Social Licence
Earn trust by building meaningful relationships and partnerships

Our Values

Care for
- People’s safety
- Communities
- Planet

Courage to
- Try new things
- Speak up
- Do what’s right

Curiosity fosters
- Collaboration
- Learning
- Innovation
Where we operate

2020 production

**Aluminium** 3.2Mt

**Bauxite** 56.1Mt

**Copper** 527.9kt

**Minerals**
- Titanium dioxide slag 1.1Mt
- Pilbara shipments 330.6Mt
- IOC iron ore pellets & concentrate 10.4Mt

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More than 87% of non-current assets in OECD
2020 non current assets (other than excluded items* and non controlling interest) by region

- Canada: 22%
- US: 10%
- South America: 4%
- Africa: 5%
- Other Asia: 2%
- Mongolia: 6%
- Australia / NZ: 51%

*2020 non current assets (other than excluded items* and non controlling interest) by region
Revenue by destination and commodity, 2020

By destination
- China: 58%
- North America: 6%
- Other Asia: 8%
- Japan: 4%
- Europe: 10%
- Other: 14%

By commodity
- Iron Ore: 66%
- Aluminium: 20%
- Copper & Gold: 5%
- Minerals: 5%
- Other: 5%
- Diamonds: 1%

$44.6bn
Consolidated sales revenue in 2020

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### Portfolio: quality, diversified assets

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Iron ore</th>
<th>Aluminium</th>
<th>Copper</th>
<th>Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic approach</strong></td>
<td>Optimise and flex</td>
<td>Protect and fix</td>
<td>Unlock growth</td>
<td>Develop opportunities</td>
</tr>
<tr>
<td><strong>Priorities</strong></td>
<td>Value over Volume</td>
<td>Production creep</td>
<td>Fast-track options from exploration</td>
<td>Value over Volume</td>
</tr>
<tr>
<td></td>
<td>Product quality</td>
<td>Customer / product mix optimisation</td>
<td>Develop growth projects</td>
<td>Partnerships</td>
</tr>
<tr>
<td></td>
<td>Productivity / automation</td>
<td>Energy costs / source</td>
<td>Apply technology to unlock volumes</td>
<td>Partnerships</td>
</tr>
<tr>
<td></td>
<td>Renewables</td>
<td>Reduce capital intensity</td>
<td></td>
<td>Partnerships</td>
</tr>
<tr>
<td></td>
<td>Increase variable cost base</td>
<td>Low-carbon technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partnerships</td>
<td>Partnerships</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long-term market conditions</strong></td>
<td>Low growth</td>
<td>Moderate primary demand growth</td>
<td>Depletion and demand growth</td>
<td>High demand growth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price-cost squeeze</td>
<td>Fragmented supply side</td>
<td>Evolving downstream markets</td>
</tr>
<tr>
<td><strong>EBITDA margin (H1 2021)</strong></td>
<td>79%</td>
<td>36%</td>
<td>61%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>ROCE¹</strong></td>
<td>121%</td>
<td>12%</td>
<td>13%</td>
<td>19%</td>
</tr>
</tbody>
</table>

¹Return on Capital Employed (ROCE) defined as underlying earnings (to 30 June 2021) before net interest divided by average capital employed (operating assets before net debt).

See Mine & production facilities details in the Rio Tinto Fact Book addendum on [https://www.riotinto.com/invest](https://www.riotinto.com/invest)
A disciplined business generating strong returns over the cycle

Strength and resilience from:

- Quality of our assets
- Capability of our people
- Operational performance
- Innovative partnerships
- Disciplined capital allocation

Resilient group margin and returns through the cycle

*Return on Capital Employed (ROCE) is defined as underlying earnings before net interest divided by average capital employed (operating assets before net debt)
Disciplined allocation of capital remains at our core

1. Essential capex
   Integrity, Replacement, Decarbonisation

2. Ordinary dividends

3. Iterative cycle of

- Further cash returns to shareholders
- Compelling growth
- Debt management
Outstanding financial results

<table>
<thead>
<tr>
<th>($bn, except for per share data)</th>
<th>H1 2021</th>
<th>H1 2020</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated sales revenue</td>
<td>33.1</td>
<td>19.4</td>
<td>+71%</td>
</tr>
<tr>
<td>Underlying EBITDA</td>
<td>21.0</td>
<td>9.6</td>
<td>+118%</td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>50%</td>
<td>21%</td>
<td>n/a</td>
</tr>
<tr>
<td>Cash flow from operations</td>
<td>13.7</td>
<td>5.6</td>
<td>+143%</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>10.2</td>
<td>2.8</td>
<td>+262%</td>
</tr>
<tr>
<td>Underlying earnings</td>
<td>12.2</td>
<td>4.8</td>
<td>+156%</td>
</tr>
<tr>
<td>Underlying earnings per share ($)</td>
<td>7.52</td>
<td>2.94</td>
<td>+156%</td>
</tr>
<tr>
<td>Net earnings</td>
<td>12.3</td>
<td>3.3</td>
<td>+271%</td>
</tr>
<tr>
<td>Total dividend per share ($)</td>
<td>5.61</td>
<td>1.55</td>
<td>+262%</td>
</tr>
<tr>
<td>Net cash / (debt)</td>
<td>3.1</td>
<td>(0.7)</td>
<td></td>
</tr>
</tbody>
</table>
Significant support from higher prices

Underlying EBITDA $bn

<table>
<thead>
<tr>
<th></th>
<th>H1 2020</th>
<th>H1 2020</th>
<th>Flexed H1 2020</th>
<th>H1 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices</td>
<td>12.8</td>
<td>9.6</td>
<td>12.8</td>
<td>21.7</td>
</tr>
<tr>
<td>Exchange</td>
<td>0.6</td>
<td>0.0</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Energy</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.1</td>
<td>0.0</td>
<td>0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Volumes &amp; Mix</td>
<td>0.4</td>
<td>0.4</td>
<td>0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Unit cash costs</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Noncash costs /other</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Iron Ore: +9.9 
Copper: +1.2 
Aluminium: +1.1 
Other: +0.7
Reinvesting for growth and decarbonisation

Capital expenditure profile

<table>
<thead>
<tr>
<th>Year</th>
<th>Depreciation</th>
<th>Sustaining</th>
<th>Other replacement</th>
<th>Decarbonise our assets</th>
<th>Pilbara replacement</th>
<th>Ambition</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018A</td>
<td>~5.4bn</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2019A</td>
<td>~5.5bn</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2020A</td>
<td>~6.2bn</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2021F</td>
<td>~7.5bn</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2022F</td>
<td>~8.0bn</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2023F</td>
<td>~9.0-10.0</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
<tr>
<td>2024F</td>
<td>~9.0-10.0</td>
<td>~5.5bn</td>
<td>~6.2bn</td>
<td>~7.5bn</td>
<td>~8.0bn</td>
<td>~9.0-10.0</td>
</tr>
</tbody>
</table>

- Sustaining capital of ~$3.5bn per year including Pilbara Iron Ore of ~$1.5bn
- ~$0.5bn per year to decarbonise our assets from 2022 to 2024
- Total decarbonisation investment of ~$7.5bn* from 2022 to 2030, predominantly in second half of decade
- Ambition to grow and decarbonise reflected in 2023-24 capex of up to ~$9-10bn including up to $3bn in growth spending, depending on opportunities
- Replacement spending unchanged at $2-3bn per year

*Conceptual view of capital requirements at October 2021. Marginal Abatement Cost Curves (MACC) will be updated on an annual basis

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We are in very robust financial health

ROCE (post-tax) – outperforming our peers

Attractive cash flows

$bn

Operating cash flow
Free cash flow

Strong balance sheet
Net debt (cash) $bn

Investing consistently and with discipline through the cycle
Maintain a strong balance sheet. Focus on “Single A” credit metrics
We can grow and invest in decarbonisation whilst continuing to pay attractive dividends to shareholders – in line with our policy

Peers: BHP, Vale, Anglo American and Glencore | *Consensus (Visible Alpha, 15 October 2021) | **Pro-forma net debt (cash) adjusts for the remainder of previously announced buy-backs from operations, lags in shareholder returns from disposal proceeds, Australian tax lag (December only) and disposal-related tax lag and the impact of IFRS 16 Leases accounting change for the prior periods. This lease accounting change is reflected in the June and December 2019 reported net debt

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Attractive dividends remain paramount

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

Pay-out ratio (%)

Consistent five-year record of shareholder returns

Pay-out ratio policy de-risks the company

60% average pay-out on ordinary dividend over past 5 years

73% average pay-out in total

Our financial strength allows us to simultaneously:

- reinvest for growth
- accelerate our own decarbonisation
- continue to pay attractive dividends to shareholders in line with our policy

Excluding divestment proceeds returned to shareholders
## Strong foundation for growth, decarbonisation and shareholder returns

<table>
<thead>
<tr>
<th>Outstanding foundation</th>
<th>Clear strategy</th>
<th>Compelling investment proposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>- No fossil fuel extraction</td>
<td>- Accelerate our own decarbonisation</td>
<td>- Deliver value-adding growth</td>
</tr>
<tr>
<td>- Long-life assets producing vital commodities</td>
<td>- Grow in materials enabling the global energy transition</td>
<td>- Continue to pay attractive dividends in line with our policy</td>
</tr>
<tr>
<td>- Resilient cash flows through the cycle</td>
<td>- Develop products and services that help our customers to decarbonise</td>
<td>- Attractive partner to our customers and host countries</td>
</tr>
<tr>
<td>- Capital discipline</td>
<td></td>
<td>- Reduce risks by accelerating our own low-carbon transition</td>
</tr>
<tr>
<td>- Robust financial position</td>
<td></td>
<td>- Maintain financial strength and resilience</td>
</tr>
<tr>
<td>- Advantageous renewables position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- World-class pipeline of projects and exploration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best operator</th>
<th>Impeccable ESG credentials</th>
<th>Excel in Development</th>
<th>Strengthening our social licence</th>
</tr>
</thead>
</table>

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# Group level financial guidance

<table>
<thead>
<tr>
<th>CAPEX</th>
<th>FY2021</th>
<th>FY2022</th>
<th>FY2023</th>
<th>FY2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Group</td>
<td>~$7.5bn</td>
<td>~$8.0bn</td>
<td>~$9.0 – 10.0bn</td>
<td>~$9.0 – 10.0bn</td>
</tr>
<tr>
<td>Sustaining Capex Group</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
</tr>
<tr>
<td>Pilbara Sustaining Capex</td>
<td>~$1.5bn</td>
<td>~$1.5bn</td>
<td>~$1.5bn</td>
<td>~$1.5bn</td>
</tr>
</tbody>
</table>

- $0.5bn per year to decarbonise our assets from 2022 to 2024
- Total decarbonisation investment of ~$7.5bn* from 2022 to 2030, predominantly in second half of decade
- Ambition to grow and decarbonise reflected in 2023-24 capex of $9-10bn including up to $3bn in growth spending, depending on opportunities
- Replacement spending $2-3bn per year

<table>
<thead>
<tr>
<th>Effective tax rate</th>
<th>30%</th>
</tr>
</thead>
</table>

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

*Conceptual view of capital requirements at October 2021. Marginal Abatement Cost Curves (MACC) will be updated on an annual basis.
## Product group level guidance

<table>
<thead>
<tr>
<th>Product Group</th>
<th>2021 Production Guidance</th>
<th>2021 Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore Shipments</td>
<td>320 – 325mt&lt;sup&gt;2&lt;/sup&gt; (100% basis)</td>
<td>$18.0-18.5/wmt (FOB), based on an Australian dollar exchange rate of $0.75</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mined Copper</td>
<td>~500kt&lt;sup&gt;3&lt;/sup&gt;</td>
<td>C1 Copper unit costs 75-80 US c/lb</td>
</tr>
<tr>
<td>Refined Copper</td>
<td>190 – 210kt&lt;sup&gt;4&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Aluminium</td>
<td></td>
<td>Modelling guidance provided for Canadian smelters only (see slide 80)</td>
</tr>
<tr>
<td>Bauxite</td>
<td>54 – 55mt&lt;sup&gt;6&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Alumina</td>
<td>7.8 – 8.2mt</td>
<td></td>
</tr>
<tr>
<td>Aluminium</td>
<td>3.1 – 3.3mt</td>
<td></td>
</tr>
<tr>
<td>Minerals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TiO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>~1.0&lt;sup&gt;7&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>IOC pellets and concentrate&lt;sup&gt;8&lt;/sup&gt;</td>
<td>9.5 – 10.5mt</td>
<td></td>
</tr>
<tr>
<td>B&lt;sub&gt;2&lt;/sub&gt;O&lt;sub&gt;3&lt;/sub&gt;</td>
<td>~0.5mt</td>
<td></td>
</tr>
<tr>
<td>Diamonds</td>
<td>3.0 – 3.8m carats&lt;sup&gt;5&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Rio Tinto share unless otherwise stated.
<sup>2</sup> Pilbara shipments guidance remains subject to COVID-19 disruptions including risks around mandatory vaccination for the resources industry in Western Australia as of 1 December, and risks around commissioning of new mines and management of cultural heritage.
<sup>3</sup> Remains subject to COVID-19 disruptions and risks around mine plan sequencing following geotechnical issues at Kennecott.
<sup>4</sup> Reduction reflects a Kennecott smelter incident in September resulting in force majeure on customer contracts.
<sup>5</sup> Diamonds 2021 guidance and actuals are for Diavik only for comparability, following Argyle closure in 2020. Unadjusted Diamonds production for 2020 was 14.7 million carats, including both Diavik and Argyle operations.
<sup>6</sup> Reduction reflects equipment reliability issues and operational instability at the Pacific mines. The focus in the fourth quarter is on the recovery of plant equipment availability and asset health to support 2022 performance.
<sup>7</sup> Full year titanium dioxide slag production guidance has been reinstated following stabilisation of the security situation at Richards Bay Minerals in South Africa and resumption of operations.
<sup>8</sup> Iron Ore Company of Canada.
An integrated approach to sustainability

Running a safe, responsible and profitable business

- Health, safety & wellbeing
- People
- Human rights
- Environment
- Tailings
- Ethics & integrity

Collaborating to enable long-term economic benefits

- Communities
- Social & economic development
- Taxes paid

Pioneering materials for human progress

- Climate change
- Materials of the future
- Partnerships
- Closure
Working towards impeccable ESG credentials

**Everyday Respect Initiative**
- Building a safer, more respectful and inclusive workforce
- Continued commitment to improve female representation by 2 percentage points per year

**Building on our transparency**
- 2020 Statement on Modern Slavery: 5th report in line with UK legislation, 1st under Australia’s new legislation
- Additional heritage disclosures in September

**Embedding communities & heritage in daily operations**
- Adjustments to 2021 mine plans, Agreement modernisation, Building capability via virtual reality training, Indigenous Advisory Group

**Improving practices to minimise our environmental impact**
- Contributed to and endorsed framework for the Taskforce on Nature-related Financial Disclosures
- Updated details of global tailings facilities

**Decarbonising our business and value chain**
- New partnerships: ARENA, POSCO, Schneider Electric, Charge On Innovation Challenge

**ELYSISTM**
- Construction of first commercial size prototype cells

**Extracting full value from our resources**
- Commenced operations at RTFT scandium demonstration plant
Incorporation of ESG into the remuneration policy

In addition to safety, which makes up 20% of the STIP, from 2021 15% of the STIP will be focused on specific E, S and G objectives.

Our 2021 ‘E’ component on progressing our emissions and abatement projects and partnerships. Refer to “Our Approach to Climate Change 2020” for more detail.

The 2021 ‘S’ component on improving the representation of women. Increasing female representation will help create an environment that is better prepared to welcome all other forms of diversity.

For 2021, we will measure under the ‘G’ component progress made on a Group level in the social performance function, on assurance and organisation alignment.

Further information can be found in our 2020 Annual Report
Strong safety performance

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

Zero fatalities in 2020

AIFR of 0.37
Down from 0.42 in 2019

29% decrease
in the rate of new occupational illnesses since 2019

Further information can be found in our Sustainability Fact Book
Our people

- 47,500 people in 35 countries
- 12% of our residential workforce in the Pilbara are Aboriginal People
- 1/3 of our Board of Directors are women
- 26% of senior leadership roles are held by women
- $50M investment to advance Indigenous leadership across Australia
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.

37,000 suppliers in over 120 countries

$220 billion in economic contribution (2016-20)

$47 million in community investment in 2020
Increasing transparency for our stakeholders

A commitment to reporting on:

**Ongoing progress** against our own commitments and internal work-streams, external obligations and recommendations.

The **enhanced governance** arrangements in place to oversee the company’s progress against these actions.

How Traditional Owners’ views are being sought and considered in shaping these commitments and **Traditional Owners’ perspectives** on how successfully these commitments are being met.

How the company is working to **advocate for enhanced sector-wide cultural heritage management** and how this is consistent with our internal standards.
## Working to improve in multiple areas

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remedying and rebuilding our relationship with the PKKP people</td>
</tr>
<tr>
<td>2</td>
<td>Partnering with Pilbara Traditional Owners in modernising and improving agreements</td>
</tr>
<tr>
<td>3</td>
<td>Establishing the new Communities and Social Performance model</td>
</tr>
<tr>
<td>4</td>
<td>Building local capability and capacity to support the site General Manager</td>
</tr>
<tr>
<td>5</td>
<td>Improving our governance, planning and systems where it relates to communities</td>
</tr>
<tr>
<td>6</td>
<td>Reducing barriers to, and increasing, Indigenous employment</td>
</tr>
<tr>
<td>7</td>
<td>Increasing Indigenous leadership and developing cultural competency within Rio Tinto</td>
</tr>
<tr>
<td>8</td>
<td>Establishing a process to redefine and improve cultural heritage management standards</td>
</tr>
<tr>
<td>9</td>
<td>Establishing an Australian Advisory Group</td>
</tr>
<tr>
<td>10</td>
<td>Elevating external consultation</td>
</tr>
<tr>
<td>11</td>
<td>Elevating employee engagement</td>
</tr>
</tbody>
</table>
Our economic contribution

$47bn
Direct economic global contribution in 2020

Global taxes paid

- Australia: $6.8bn
- Canada: $651m
- Mongolia: $277m
- Chile: $246m
- UK: $132m
- South Africa: $61m
- US: $111m

$8.4bn global taxes and royalties paid in 2020

*Payable to governments includes charges for corporate income tax, government royalties, employer payroll taxes and other charges.

Further information can be found in our Taxes Paid report
Building our capability to adapt and collaborate

**Cultural heritage practice**
In partnership with Traditional Owners where we make joint decisions and transfer knowledge across generations.

**Indigenous leadership**
We need to attract, grow and retain the brightest talent to navigate ever-increasing expectations and grow value.

**Indigenous Advisory Group**
Indigenous leaders build a relationship with Rio Tinto and advise our senior leaders on business performance and commitments, and emerging issues or opportunities to position the company for strong Indigenous partnerships.

**Economic participation**
Indigenous groups have grown in education, funds and land holdings, driving our need for a much more sophisticated and evolved approach.

**Cultural competence**
Senior leaders must genuinely be open to better understanding Indigenous Australia, including communities, dynamics and emerging issues.

**Entry-level opportunities**
Employment and business development must remain a focus while Indigenous Australians experience higher unemployment and an unequal share of business opportunities.
Investing $50m to accelerate Indigenous leadership

A strategic approach that’s a first for corporate Australia

Changing our mindset; hiring and growing for potential

Elevating the Indigenous voice at our decision-making tables

Charting our future direction and unlocking business value

Across all of our Australian businesses

200+ participating in a leadership development program

Doubled the number of Indigenous leaders since Aug’20

Partnering with the right experts to lift our expertise

62 Senior leaders and Indigenous employees in two-way mentoring

Attract Retain Grow

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Sustainable future across the value chain

1. Partnering with our suppliers and developing sustainable supply chains
   - Assets
   - Customers
   - Suppliers

2. Working together with our customers to provide products & services for a more sustainable future
   - Markets

3. Innovating with our customers to enable them to decarbonise
   - Communities
Our value chain

Promoting responsible practices from mine to market

Further information including our Supplier Code of Conduct can be found on our website
All our commodities are vital – today, towards 2050 and beyond

Ongoing population growth and urbanisation provides base demand for metals

Additional demand for all our products from decarbonisation and global energy transition

Often no alternatives to steel, aluminium, copper and minerals from primary sources even with circular economy

Creates opportunities for us to deliver value-adding growth
A large carbon footprint today

Global commodity value chain carbon emissions and intensities

<table>
<thead>
<tr>
<th>Global</th>
<th>CO₂ emissions</th>
<th>Production</th>
<th>CO₂ intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper*</td>
<td>86 Mt</td>
<td>21 Mt</td>
<td>4 tCO₂/t</td>
</tr>
<tr>
<td>Aluminium*</td>
<td>~1.0 Gt</td>
<td>66 Mt</td>
<td>15 tCO₂/t</td>
</tr>
<tr>
<td>Crude Steel</td>
<td>~3.3 Gt</td>
<td>1,850 Mt</td>
<td>1.8 tCO₂/t</td>
</tr>
</tbody>
</table>

Our 2020 Scope 1 and 2 emissions by operations (equity basis)

Total CO₂e

<table>
<thead>
<tr>
<th>Category</th>
<th>CO₂e (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore</td>
<td>3.0</td>
</tr>
<tr>
<td>Copper</td>
<td>2.7</td>
</tr>
<tr>
<td>Bauxite &amp; Alumina</td>
<td>6.4</td>
</tr>
<tr>
<td>Aluminium (Pacific)</td>
<td>10.1</td>
</tr>
<tr>
<td>Minerals**</td>
<td>3.6</td>
</tr>
<tr>
<td>Bauxite &amp; Alumina</td>
<td>5.3</td>
</tr>
<tr>
<td>Aluminium (Atlantic)</td>
<td>6.4</td>
</tr>
<tr>
<td>Total</td>
<td>31.5 Mt</td>
</tr>
</tbody>
</table>

Our 2020 Scope 3 emissions

Total CO₂e

<table>
<thead>
<tr>
<th>Category</th>
<th>CO₂e (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC iron ore</td>
<td>13</td>
</tr>
<tr>
<td>Bauxite &amp; Alumina</td>
<td>116</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>519 Mt</td>
</tr>
</tbody>
</table>

*Primary production | **Iron Ore Company of Canada (IOC) included in Minerals
Delivering our strategy

**50% reduction in our emissions by 2030**

New targets for our Scope 1 & 2 emissions (Mt CO₂e equity basis)

- 2018*: 32.6
- 2025: 16.3
- 2030: 16.3
-15%  -50%

- Advantaged renewables position
- Accelerate R&D
- ELYSISTM
- Studying Canadian DRI
- High-quality iron ore
- Partnerships
- Crack the code on Pilbara iron ore
- Delivering our Scope 3 goals

~$7.5bn*** investment in decarbonisation from 2022-2030 plus indirect expenditure

**Ambition to double investment in growth**

Growth to 2030 (multiple of current size)**

- 10
- 5.5
- 3.8
- 1.5

- Market Size ($bn)
- 2020: 3
- 2030: 28
- Lithium: 9
- Nickel (Class 1): 4
- Cobalt: 13
- Copper: 184

Double growth capex up to $3bn per year from 2023

*2018 Scope 1 & 2 emissions baseline has been adjusted for divestments. **Market size is for primary market only. Recycling is expected to take a larger share of total demand in the future for most commodities. ***Conceptual view of capital requirements at October 2021. Marginal Abatement Cost Curves (MACC) will be updated on an annual basis. Sources: Rio Tinto Market Analysis, UBS, CPM Group | DRI = Direct Reduction Iron
# Broad-based funding model for decarbonisation

## Capital expenditure

- **~$7.5bn over 2022-30**
  - Pilbara energy system | ELYSISTM implementation capital | MACC projects

## Operating expenditure

- **New capability | Energy efficiency | R&D**

## Long-term contracts

- **Pacific Aluminium smelters and refineries Kennecott**

## Partnerships*

- **Green steel: 25 existing R&D partnerships – more targeted**

---

*Examples provided under each category of funding is not an exhaustive list and options for decarbonisation will continue to evolve.

*Funding model to be determined. MACC = Marginal Abatement Cost Curve*
Well placed to deliver

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

---

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

Assets and people
Long-life orebodies with superior orebody knowledge. Talented workforce

Technology
Metallurgy, geology, mining equipment, processing, energy

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

*RES = Renewable Energy System
Our Scope 1 & 2 carbon footprint today

<table>
<thead>
<tr>
<th>Component</th>
<th>2020 Mt CO₂e</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity (purchased and generated)</td>
<td>8.5</td>
<td>45%</td>
</tr>
<tr>
<td>Anodes and reductants</td>
<td>6.0</td>
<td>25%</td>
</tr>
<tr>
<td>Process heat</td>
<td>4.4</td>
<td>18%</td>
</tr>
<tr>
<td>Diesel</td>
<td>2.2</td>
<td>12%</td>
</tr>
</tbody>
</table>

Total 2020 Mt CO₂e: 31.5

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Climate change / Materials of the future
Taking actions to address our emissions

**Electricity**
Growing renewables from 75%¹
- Gudai-Darri (34MW), QMM (20MW) and Weipa (4MW)
- Large scale (1GW) Pilbara renewables
- Switching Boyne Island and Tomago smelters to renewables
- Signed statement of cooperation with Queensland Government

**Anodes & Reductants**
Developing technologies
- Construction of first ELYSIS™ commercial-scale cell at Alma
- Increasing R&D

**Process heat**
Redesigning processes
- Yarwun hydrogen calcination pilot
- Plasma torches trials

**Diesel**
Partnering with industry
- Komatsu and Caterpillar zero-emission truck partnerships
- Charge On Innovation Challenge

**Offsets**
Building capacity and capability including new technology partnerships

¹Share of renewables in 2020 across our managed operations
Raising our decarbonisation target from 15% to 50% by 2030

Our Scope 1 & 2 emissions (Mt CO₂e equity basis)

<table>
<thead>
<tr>
<th>Year</th>
<th>Business-as-usual</th>
<th>Pilbara renewables</th>
<th>Pacific Aluminium Operations repowering</th>
<th>MACC** projects</th>
<th>Other****</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018*</td>
<td>32.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32.6</td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16.3</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Accelerate delivery of existing 15% emissions reduction target to 2025

2030 target from 15% to 50% reduction

Increase decarbonisation investment of our own assets to ~$1.5bn over next three years and total investment of ~$7.5bn from 2022 to 2030***

Incentivise MACC projects with internal carbon price of $75/t CO₂ initially

---

*2018 Scope 1 & 2 emissions baseline has been adjusted for divestments. | **Marginal abatement cost curve, see slide 28 | ***Conceptual view of capital requirements at October 2021. MAC curves will be updated on an annual basis | ****Includes energy efficiencies, ELYSISTM and carbon offsets

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Switching the Pilbara to renewables

To replace gas power and early electrification

MW installed renewables

Rapid deployment of ~1GW solar and wind renewables, supported by storage

Abates ~1Mt CO₂ Scope 1 emissions, mostly from gas-based power for fixed plants

Full electrification and decarbonisation of Pilbara system require further deployment of renewables at scale

Exploring development partnerships

First Gigawatt

<table>
<thead>
<tr>
<th>MW installed renewables</th>
</tr>
</thead>
<tbody>
<tr>
<td>To replace gas power and early electrification</td>
</tr>
<tr>
<td>Fully displace diesel in rail and mobile fleet</td>
</tr>
</tbody>
</table>

Natural gas repowering

Diesel repowering

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## Progressing renewable power options for Australian smelters

<table>
<thead>
<tr>
<th>Assets in coal-based grids</th>
<th>Ownership</th>
<th>Power (100% basis)</th>
<th>Contract expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomago smelter</td>
<td>51.6%</td>
<td>960MW (demand)</td>
<td>2028</td>
</tr>
<tr>
<td>Boyne Island smelter</td>
<td>59.4%</td>
<td>810MW (demand)</td>
<td>2029</td>
</tr>
<tr>
<td>Gladstone power station</td>
<td>42.1%</td>
<td>1,680MW (capacity)</td>
<td></td>
</tr>
</tbody>
</table>

Catalyst for regional renewable energy deployment and development of industry

- Signed Statement of Cooperation with Queensland Government
- Requires deployment of 5GW+\(^{1}\) of solar and wind power with robust firming solution

---

\(^{1}\) Equity share
Accelerating current abatement projects

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

As of 30 September 2021

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Developing green products for our customers

Scope 3 goals

1. Technology for reductions in steelmaking carbon intensity of at least 30% from 2030
2. Breakthrough technologies to deliver carbon neutral steelmaking pathways by 2050
3. Anticipate that ELYSISTM technology will reach commercial maturity in 2024
4. Net zero emissions from shipping our products by 2050

By source
- Pilbara iron ore: 363 Mt CO₂e
- IOC iron ore: 13 Mt CO₂e
- Bauxite and alumina: 116 Mt CO₂e
- Other: 27 Mt CO₂e

By region
- China: 390 Mt CO₂e
- Japan: 44 Mt CO₂e
- South Korea: 17 Mt CO₂e
- EU: 8 Mt CO₂e
- Other: 61 Mt CO₂e
A shift to greener steelmaking technologies

**Short-term / partial decarbonisation**
- Lump / pellet high-grade iron ore
- Hydrogen (H₂) injection

**Medium / Long-term / net-zero potential**
- BF optimisation + CCUS
- Biomass pig iron
- Green H₂ direct reduction
- Green H₂ direct reduction + melter

**New technologies**
- Direct Smelting
- New iron and steelmaking electric furnace
- Electrolysis

**Driving need for high-quality iron ore**

---

1 These products can be used in an EAF or BOF | BF = Blast furnace, BOF = Basic oxygen furnace, DR = Direct reduction, EAF = Electric arc furnace, CCUS = carbon capture, utilisation and storage

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Our focus areas for iron and steel decarbonisation

Future pathways for Pilbara iron ore

1. Blast furnace optimisation
   - Multiple projects
2. Pilbara beneficiation
   - CSIRO / Universities
3. Low-carbon research project
   - Pilbara pathway 1
4. \( \text{H}_2 \) DRI and melter
   - Pilbara pathway 2
5. Simandou
   - High-quality iron ore
6. \( \text{H}_2 \) DRI Canada
   - Project – study phase

Customer partnerships
We have a dedicated steel decarbonisation team

DRI = Direct reduction iron, CSIRO = Commonwealth Scientific and Industrial Research

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Market outlook
Transitional towards net zero emissions

Low-carbon policies
- Net zero by 2050¹
- Net zero by 2050²
- Carbon neutral by 2060³

Scrap use
Cannibalises some demand for primary material

<table>
<thead>
<tr>
<th>Material</th>
<th>Al</th>
<th>Steel</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4-6%</td>
<td>1-3%</td>
<td>3-4%</td>
</tr>
</tbody>
</table>

Electrification
2.5x electrification growth from now to 2050 in net zero scenario
Average per capita electricity demand will more than double

Renewables
Renewable energy from 10% to 70% of energy mix by 2050
- 16x wind increase
- 30x solar increase

Power storage
Battery capacity additions for electric vehicles will grow over 30x by 2050
Stationary storage will grow with intermittent renewable generation

Hydrogen
A critical part of the fuel mix in industry and heavy transport
6% of final energy mix by 2050

¹ EU Updated Nationally Determined Contribution (NDC), Dec 2020, United Nations Framework Convention on Climate Change (UNFCCC) | ² As per section 4.a(ii).b, The United States of America Nationally Determined Contribution, April 21 2021 | ³ Official Statement in 75th Session of The UN General Assembly, Sep 2020 Source: Net zero statistics from International Energy Association (IEA)

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All our commodities are vital – today, towards 2050 and beyond

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Symbol</th>
<th>Atomic Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium</td>
<td>Al</td>
<td>13</td>
</tr>
<tr>
<td>Boron</td>
<td>B</td>
<td>5</td>
</tr>
<tr>
<td>Copper</td>
<td>Cu</td>
<td>29</td>
</tr>
<tr>
<td>Iron</td>
<td>Fe</td>
<td>26</td>
</tr>
<tr>
<td>Lithium</td>
<td>Li</td>
<td>3</td>
</tr>
<tr>
<td>Titanium</td>
<td>Ti</td>
<td>22</td>
</tr>
</tbody>
</table>

- Green aluminium lowers carbon input
- Green steel supporting low-carbon urbanisation
- Copper supports rapid renewable electrification
- Lithium is an essential battery technology mineral
China is targeting peak emissions by 2030

**Aluminium:**
- 6% capacity start curtailment since September
- 22% instructed to close due to energy controls
- 27% capacity at risk

**Steel:**
- 40% production affected
- 60% production affected
- 10% production affected

---

**Electricity:**
- new aluminium smelter tariff rumoured to rise 50% from RMB 250/MWh to RMB 375/MWh
- 57% capacity closed or idled
- 50% production affected

**Aluminium:**
- 22% instructed to close due to energy controls
- 14% capacity instructed to close due to energy controls
- 6% capacity start curtailment since September

**Steel:**
- 10% production affected
- 10% production affected

---

**Electricity:**
- initiate floating price of power by introducing an escalator of RMB 15/MWh for every RMB 50/t increase in coal price
- peak time prolonged to 7 hours per day and tariff for peak hours in summer lifted by 25% vs. original tariff
- downstream facilities open only 2 days per week

**Aluminium:**
- downstream cable capacity 10% curtailed
- small-sized downstream facilities closed till Sep end
- 22% instructed to close due to energy controls

**Steel:**
- 10% production affected
- 10% production affected

---

**Aluminium:**
- 30% production affected
- 10% production affected

**Steel:**
- 30% capacity affected
- 10% production affected

---

China power cuts and energy control policy notifications by region (at 15 October 2021)

1 Level I Alert (9 provinces)
2 Level II Alert (10 provinces)
3 Level III Alert (10 provinces)
Competitive advantage for low-carbon smelters

Aluminium smelter all-in cash costs
(Real US$2021 per tonne)

<table>
<thead>
<tr>
<th></th>
<th>Hydro</th>
<th>Coal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021e</td>
<td>1,190</td>
<td>1,650</td>
</tr>
<tr>
<td>$50/t</td>
<td>330</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>1,420</td>
<td></td>
</tr>
<tr>
<td>$100/t</td>
<td>290</td>
<td>770</td>
</tr>
<tr>
<td></td>
<td>1,520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>770</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,490</td>
</tr>
<tr>
<td></td>
<td></td>
<td>770</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>1,520</td>
<td>2,630</td>
</tr>
<tr>
<td>$50/t</td>
<td>290</td>
<td>750</td>
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<td>2030</td>
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<td>770</td>
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<tr>
<td>2030</td>
<td>1,190</td>
<td>3,370</td>
</tr>
<tr>
<td>$50/t</td>
<td>290</td>
<td>1,490</td>
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</tr>
<tr>
<td>2030</td>
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<td>$100/t</td>
<td>290</td>
<td>770</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2030</td>
<td>1,520</td>
<td></td>
</tr>
<tr>
<td></td>
<td>290</td>
<td>770</td>
</tr>
</tbody>
</table>

60% of world’s aluminium production in 2020 powered by coal

China accounted for ~75% of capacity growth over 2010-20

Carbon intensity of coal smelters is over 7x that of hydro smelters

Inert anodes could enable zero-carbon smelting

Carbon price assumption

All non-carbon costs are regional weighted averages from CRU, 2021 (long-run uses 2030 costs). Hydro costs are based on a weighted average of Canadian smelters. Coal costs are based on a weighted average of coal-fired Chinese smelters. Costs do not include CO2 charges from alumina refineries.
Green steel structures can reduce emissions

Building construction is responsible for about 30% of China’s carbon emissions.

New China building code will require higher seismic precautionary intensity.

A shift to green construction and steel structures will reduce carbon emissions by ~60%.

Moving to steel structures contributes up to a third of the total emissions reduction.

Steel intensity of construction increases by ~45-80% across low to high rise buildings.

Source: Tsinghua School of Civil Engineering, 2021. Green construction with steel structures includes the shift to green concrete and green steel in addition to the move from current reinforced concrete structures to steel structures.
Decarbonisation is a big driver of copper demand

Additional green demand expected to account for over one quarter of total demand in the net zero carbon scenario

Rapid electrification of grid adds ~5Mt in copper demand by 2050

Solar and wind generation consume ~3-6 tonnes of copper per MW respectively vs ~1 tonne per MW for thermal power

Electric vehicles contain ~80kg of copper vs 20kg in an internal combustion engine

Net additional demand* in a net zero carbon scenario

Net demand after deducting copper consumption using traditional technologies in these segments. Net zero carbon scenario is an internal based view where developed countries reach net zero emissions by 2050, large emerging markets, including China, by 2060 and all other countries by 2070. Average intensity data from International Copper Association (ICA). *Global semis

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Significant supply gap emerging for lithium

Lithium demand and supply in net zero carbon scenario
(Multiple of 2020 demand levels, Lithium Carbonate Equivalent)

By 2030, electric vehicles will account for up to 55% of annual light vehicle sales

Lithium is the preferred material in electric vehicle batteries and has potential upside in emerging solid state battery chemistry

Supply gap will require over 60 Jadar projects

- Committed supply and capacity expansions contribute ~15% to demand growth over 2020-50
- Remaining 85% would need to come from new projects

Net zero carbon scenario is an internal based view where developed countries reach net zero emissions by 2050, large emerging markets, including China, by 2060 and all other countries by 2070.
Energy and industrial transition drives demand for our products

Limiting the impact of climate change requires a green revolution

This social-industrial change will profoundly shift the energy and industrial landscape

Green metals and minerals will be key enablers
Iron ore
Iron Ore

Western Australia

16 iron ore mines in the Pilbara

3 solar salt operations

5 mainstream iron ore products

$16.1bn Underlying EBITDA (H1 2021)

4 port terminals

1,700km rail network

Flagship Pilbara Blend™

79% Underlying free on board (FOB) EBITDA margin (H1 2021)
Iron Ore
Strong financial result despite operational challenges

Production impacted by weather, tie-in of replacement mines, plant availability and cultural heritage management

COVID-19 and tight labour market impacted access to experienced contractors and particular skills

A$0.3bn or 4% increase in underlying cost for the full year relative to prior guidance due to diesel and labour, COVID-19 costs (A$0.1bn in H1) and heritage management

Risk for H2 includes COVID-19 disruptions, tie-in of new and replacement mines (133mt of combined capacity) and management of cultural heritage

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>H1 2021</th>
<th>H1 2020 comparison</th>
<th>2021 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average realised price$1, $3</td>
<td>$168.4/t</td>
<td>+ 97%</td>
<td></td>
</tr>
<tr>
<td>Shipment$3 (100% basis)</td>
<td>154.1mt</td>
<td>- 3%</td>
<td>325-340Mt Low end</td>
</tr>
<tr>
<td>Unit cost$2, $3</td>
<td>$17.9/t</td>
<td>+ 23%</td>
<td>$18.0-18.5/t</td>
</tr>
</tbody>
</table>

| Financial metrics ($bn) | |
|-------------------------| |
| Revenue | 21.7 | + 89% |
| EBITDA | 16.1 | + 109% |
| Margin (FOB)$3 | 79% | + 7 pp |
| Operating cash flow | 11.0 | + 102% |
| Sustaining capex | 0.7 | + 19% | 1.2-1.6 |
| Replacement and growth capex | 1.2 | + 99% |
| Free cash flow | 9.1 | + 114% |
| Underlying ROCE | 121% | + 57 pp |

$Dry metric tonne, FOB basis | $Unit costs are based on operating costs included in EBITDA and exclude royalties (state and third party), freight, depreciation, tax and interest. Operating cost guidance based on A$US$ FX rate of 0.77 | $Pilbara only. All other figures reflect Pilbara operations, portside trading and Dampier Salt.
Iron Ore
Strong pricing supports EBITDA

Underlying EBITDA H1 2021 vs H1 2020

- Underlying EBITDA of $16.1 billion was 109% higher than 2020 first half, reflective of higher prices driven by strong global demand and constrained supply. This more than compensated for the lower sales volumes and higher operating costs, which were primarily driven by a stronger Australian dollar.

- Our Pilbara operations delivered an underlying FOB EBITDA margin of 79%.

- Gross product sales for Pilbara operations included freight revenue of $1.0 billion (2020 first half: $0.6 billion).

- We price the majority of our iron ore sales (79%) by reference to the average index price for the month of shipment. In 2021 first half, we priced approximately 12% of sales by reference to the prior quarter’s average index lagged by one month, with the remainder sold either on current quarter average or on the spot market. We made approximately 71% of our sales including freight and 29% on an FOB basis.

- We achieved an average iron ore price in 2021 first half of $154.9 per wet metric tonne on an FOB basis (2020 first half: $78.5 per wet metric tonne). This equates to $168.4 per dry metric tonne, assuming 8% moisture, (2020 first half: $85.4 per dry metric tonne) and compares to the monthly average Platts index for 62% fines converted to an FOB basis of $172.6 per dry metric tonne.

- Our iron ore shipments from the Pilbara decreased by 3% compared with 2020 first half, in line with lower production, which was attributable to sustained wet weather, particularly at the West Pilbara and Robe Valley operations, shutdowns to enable new replacement mines to be tied in, processing plant availability and cultural heritage management.

- 2021 first half Pilbara unit cash costs were $17.9 per tonne (2020 first half: $14.5 per tonne). Cost guidance for full year of $18.0-$18.5 per tonne represents an underlying cost increase of ~A$0.3 billion (on a 100% basis) relative to previous guidance of $16.7-$17.7 per tonne, or 4%. The updated guidance reflects price escalation of key input costs (diesel and labour), costs related to mine heritage management and COVID-related costs (~A$100 million, 100% basis, or US$62 million our share were incurred in 2021 first half; no COVID-19 costs included in previous guidance). It remains based on a A$:US$ exchange rate of 0.77.
Pilbara Iron Ore set for even stronger performance

14 new growth mines since 1999
Port expansion towards 360Mt, industry-leading automation
Underpinned by key acquisitions and introduction of Pilbara Blend

1999 - 2013
China expansion

2014 - 2021
Consolidation

2021+
Refocus our future

Build on outstanding financial performance
Transform our safe operating performance
Deliver new mines
Create value with our partners
Position Pilbara for green steel

$50bn free cash flow
>60% EBITDA margins
>50% average ROCE since 2016
Raising our system capacity

System capacity will be delivered by:
- Rio Tinto Safe Production System driving improved productivity
- Improved interface efficiencies across mine, plant, rail and ports
- Modest capital investment, including two additional rail consists

Requires commissioning of replacement mines, including Western Range, Bedded Hill Top and Hope Downs 2 and Brockman Syncline 1 to reach and sustain capacity

<table>
<thead>
<tr>
<th></th>
<th>Prior best performance</th>
<th>Estimated Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max month*</td>
<td>Max quarter*</td>
</tr>
<tr>
<td>Mine</td>
<td>370</td>
<td>349</td>
</tr>
<tr>
<td>Rail</td>
<td>362</td>
<td>351</td>
</tr>
<tr>
<td>Ports</td>
<td>393</td>
<td>357</td>
</tr>
<tr>
<td>System</td>
<td>362</td>
<td>351</td>
</tr>
</tbody>
</table>

*Annualised rates  | ** Mid-term defined as upon completion of the next tranche of new and replacement mines
Mine productivity to mitigate higher work index

The work index of our mining operations is increasing

Material movement (Bt)  Effective flat haul* (km)  Work index (Bt.km)  Below water table mining (%)

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<tbody>
<tr>
<td>Material movement</td>
<td>1.0</td>
<td>1.2</td>
<td>1.4</td>
<td>11</td>
<td>14</td>
<td>15</td>
<td>12</td>
<td>17</td>
<td>21</td>
<td>36%</td>
<td>42%</td>
<td>33%</td>
</tr>
<tr>
<td>Effective flat haul*</td>
<td></td>
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<tr>
<td>Work index (Bt.km)</td>
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<tr>
<td>Below water table mining (%)</td>
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</table>

Initial gains in productivity – targeting further improvement

Truck EU (Index 2018 = 100)  Payload (Index 2018 = 100)  Digger MTBF (Index 2018 = 100)  Dewatering** (Index 2018 = 100)

<table>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck EU (Index 2018 = 100)</td>
<td>100</td>
<td>105</td>
<td>115</td>
<td>100</td>
<td>105</td>
<td>106</td>
<td>100</td>
<td>126</td>
<td>135</td>
<td>100</td>
<td>109</td>
<td>117</td>
</tr>
<tr>
<td>Payload (Index 2018 = 100)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Digger MTBF (Index 2018 = 100)</td>
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<tr>
<td>Dewatering** (Index 2018 = 100)</td>
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</tr>
</tbody>
</table>

*Average haul distance travelled by each truck – adjusted for gradient  | ** Dewatering volumes increase as pit deepens  | EU = Effective utilisation, MTBF = Meantime between failure
Improving plant performance

Maintenance impacted by labour constraints
Hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>80</td>
<td>98</td>
</tr>
</tbody>
</table>

Increased planned shutdowns
Hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>97</td>
<td>114</td>
</tr>
</tbody>
</table>

Stabilising and addressing maintenance backlog
Outstanding hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>117</td>
<td>120</td>
</tr>
</tbody>
</table>

- COVID-19 restrictions impacted available labour in 2020 reducing maintenance hours
- 2021 labour availability improved but still constrained

Focus areas to address maintenance backlog:
- Shutdown alignment across system
- Improved maintenance tactics and simplified maintenance schedules
- Improved conveyor reliability though better rock breaking and targeted asset improvements

Completing the brownfield mine tie-ins will further improve plant performance
Maximising productivity from port and rail

**Rail performance**

Focus on asset health, including ballast and turnout replacement

AutoHaul delivering operational and safety improvements:
- Reduction in driver change-over delays from 90 minutes per train to zero
- One in 250 journeys require a driver to operate the train
- Reduction of 1.5 million kilometres each year in light vehicle travel

**Track speed restrictions cycle time impact**

( insurgents

<table>
<thead>
<tr>
<th>Year</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21F*</th>
<th>&lt;100</th>
</tr>
</thead>
<tbody>
<tr>
<td>232</td>
<td>132</td>
<td>121</td>
<td>110</td>
<td>&lt;100</td>
<td>22-24</td>
</tr>
</tbody>
</table>

**Port productivity**

Our ports are our competitive advantage

Focus areas:
- Optimising shut durations for capacity needs
- Reclaimer replacements 2024+
- High density ore upgrades 2022+
- Car Dumper 1 at Cape Lambert end of life 2022

**Weekly outload capacity in Q3 2021**

(Weeks**)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td>360Mtpa</td>
<td>360+</td>
</tr>
</tbody>
</table>

*At October 2021 | **Includes all full and partial weeks in Q3 2021
How we are improving our business

**Operational Readiness**

- Commission and ramp up new assets
- Reduce wait for feed at the crusher
- Reduce materials handling losses
- Reduce fixed plant unscheduled loss
- Improve rail capacity and resilience

**Rio Tinto Safe Production System**

- Gudai-Darri
- Dewatering
- Fragmentation
- Conveyor reliability
- Asset health
- Robe Valley Sustaining
- Drill and blast
- Feed strategy
- Shutdown productivity
- Cycle time
- West Angelas C&D
- Load and haul
- Engineering and technology
- Asset management
- Digital and technology
- Western Turner Syncline Phase 2
- Mine
- Port
- Rail

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Operating and sustaining capital cost outlook

**Outlook for 2022**

2021 cost guidance of $18-18.5/t

Cost pressures continue:
- Work index increase of 12% (from 2021 forecast)
- Continued investment in asset health and reliability
- Tight labour market driving higher rates
- Diesel price (+23%, 2021F v 2020)
- Cost of materials due to strong construction market and COVID-19 restrictions

**Investing in our assets**

Key focus areas:
- Asset reliability
- Plant and rail asset health
- Accommodation / camps
- Systems including IT

**Unit cost history (US$/t)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Pilbara Iron Ore</th>
<th>Peers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>2017</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>2018</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>2019</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>2020</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>2021</td>
<td>20</td>
<td>23</td>
</tr>
</tbody>
</table>

*Unit cost for peers are based off publicly available sales, revenue and EBITDA data, with adjustments made for comparison to RTIO's reporting method and products

**2021 latest cost estimate (%)**

- FTE labour: 35%
- Contractor labour: 20%
- Diesel and energy: 13%
- Materials: 12%
- Other: 10%

**Sustaining capital investment (US$bn)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>0.5</td>
<td>0.9</td>
<td>1.1</td>
<td>1.3</td>
<td>~1.5</td>
</tr>
</tbody>
</table>
Mine project pipeline

High volume of environmental approvals for new mines

Completed projects
Projects in development
Projects in study stage

Capital Intensity ($/t Real 2021)

Studies being progressed. Commissioning from 2025:
- Western Range
- Bedded Hill Top and Hope Downs 2
- Brockman Syncline 1

Approvals timeline risk has increased
Ongoing focus on quality and product mix

Shipments by product (%)

FY19
- 45% SP10
- 24% RV
- 17% HIY
- 8% PBL
- 5% PBF

FY20
- 47% SP10
- 23% RV
- 17% HIY
- 9% PBL
- 3% PBF

YTD 21
- 45% SP10
- 20% RV
- 18% HIY
- 8% PBL
- 9% PBF

FY24F
- 45% SP10
- 27% RV
- 13% HIY
- 10% PBL
- 6% PBF

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

Pilbara Blend quality maintained by:
- Blending different ore sources to tight specifications
- Producing lower quality products (including SP-10) as required

RV = Robe Valley, PBL: Pilbara Blend Lump, PBF: Pilbara Blend Fines | 2021 YTD at 30 September 2021
Positioning Pilbara ores in a green steel world

Working with customers to decarbonise the blast furnace mostly capped at ~20-30% emission reduction

Options to more cost effectively beneficiate Pilbara ores are being developed

Working on new processing routes to crack the code for Pilbara ores

Two examples shown – both early stage development but showing promise

Steel making process routes to move to ‘net neutral’

Pilbara Pathway 1: Low-carbon research project
- Raw materials: Iron Ore, Sustainable Biomass
- Ironmaking: Green Iron Process
- Steelmaking: Basic Oxygen Furnace, Electric Arc Furnace

Pilbara Pathway 2: H₂ Hot Briquetted Iron + melter
- Raw materials: Iron Ore, Hydrogen
- Direct Reduction Ironmaking: Shaft Furnace, Fluidised Bed
- Hot Briquetted Iron
- Steelmaking: Basic Oxygen Furnace, Electric Arc Furnace
Becoming the most valued resource business

**Best operator**

Transform our safe operating performance

Empower our workforce through Rio Tinto Safe Production System

**Impeccable ESG credentials**

Position Pilbara for green steel

Decarbonise the Pilbara and position our ores to participate in Green Steel

**Excel in development**

Deliver new mines of the future

Optimise Pilbara capacity, product mix and development sequence

---

**Social licence**

Create value with our partners

Connect, partner and restore trust with the community

**People at our heart**

Shift from ‘asset focus’ to ‘people focus’
Aluminium
Aluminium

Canada, Australia, New Zealand, Iceland, Brazil, Guinea, and Sultanate of Oman

4 bauxite mines

14 smelters

4 alumina refineries

$1.9bn
Underlying EBITDA (H1 2021)

7 hydropower plants
supplying clean, renewable electricity to our Canadian operations

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

Canadian and New Zealand operations are powered by clean, renewable hydropower
Aluminium
Solid operating performance in recovering markets

Operating metrics

<table>
<thead>
<tr>
<th></th>
<th>H1 2021</th>
<th>H1 2020 comparison</th>
<th>2021 Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average aluminium price(^1)</td>
<td>$2,626/t</td>
<td>+42%</td>
<td></td>
</tr>
<tr>
<td>Average alumina price(^2)</td>
<td>$288/t</td>
<td>+9%</td>
<td></td>
</tr>
<tr>
<td>Production – bauxite</td>
<td>27.3Mt</td>
<td>-4%</td>
<td>56-59Mt Low end</td>
</tr>
<tr>
<td>Production – alumina</td>
<td>4.0Mt</td>
<td>+1%</td>
<td>7.8-8.2Mt</td>
</tr>
<tr>
<td>Production – aluminium</td>
<td>1.6Mt</td>
<td>+3%</td>
<td>3.1-3.3Mt</td>
</tr>
<tr>
<td>Canadian smelters – hot metal cash costs(^3)</td>
<td>$1,262/t</td>
<td>+6%</td>
<td>Refer to p49</td>
</tr>
</tbody>
</table>

Financial metrics ($bn)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>5.9</td>
<td>+32%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>1.9</td>
<td>+108%</td>
</tr>
<tr>
<td>Margin (integrated operations)</td>
<td>36%</td>
<td>+13 pp</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>1.4</td>
<td>+27%</td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.4</td>
<td>-4%</td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.1</td>
<td>+84%</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>0.9</td>
<td>+41%</td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>12%</td>
<td>+9 pp</td>
</tr>
</tbody>
</table>

FCF of $0.9bn matches full year 2020. All PacAl smelters FCF positive

EBITDA doubles on higher sales prices and heightened demand for value-added product (VAP)

Stable production and operational performance in aluminium and alumina. Bauxite operations struggled with system stability

ELYSIS - construction of commercial size prototype cells has commenced at Alma smelter

Partnership with ARENA\(^4\) to study hydrogen as replacement for natural gas in alumina refineries in Gladstone

---

\(^1\)LME plus all-in premiums (product and market) | \(^2\)Platts Alumina PAX FOB Australia | \(^3\)Operating costs defined as hot metal cash costs for the Canadian smelters (alumina at market price) | \(^4\)Australian Renewable Energy Agency

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Aluminium
Higher prices, recovery of VAP demand and volumes

Underlying EBITDA H1 2021 vs H1 2020
$ million

- Our aluminium business delivered a significant uplift in underlying EBITDA and a substantial increase in cash flow, with free cash flow already at the same level as full year 2020. This was driven by a rebound in sales prices and heightened demand for value-added product (VAP) as markets recovered from the impact of COVID-19.
- Underlying EBITDA of $1.9 billion was more than double 2020 first half. The benefit from the stronger pricing environment, in particular for primary metal and alumina, and higher aluminium sales driven by the stability of our Canadian smelting business were only partly offset by the impact of stronger local currencies, lower bauxite shipments and some cost inflation for coke and alloys.
- This increased our industry-leading underlying EBITDA margin to 36%.
- We achieved an average realised aluminium price of $2,626 per tonne, 42% higher than 2020 first half ($1,849 per tonne).
- The cash LME price averaged $2,245 per tonne, 41% higher than 2020 first half. In our key US market, the mid-West premium duty paid recovered 28% to $318 per tonne (2020 first half: $249 per tonne).
- VAP volumes represent 50% of the primary metal we sold (2020 first half: 40%) and generated product premiums averaging $207 per tonne of VAP sold (2020 first half: $208 per tonne).
- Although we are broadly balanced in alumina, approximately 2.1 million tonnes of our legacy alumina sales contracts are exposed to a fixed linkage to the LME price. These contracts date back to 2005 or earlier, and the majority expire between 2023 and 2030. The opportunity loss from these legacy contracts was negligible in 2021 first half, compared with around $50 million in 2020 first half.
Over a hundred years of aluminium expertise

Engineering excellence

Technological expertise

Partnership and innovation
A structurally advantaged integrated business

**Bauxite**
- 4 bauxite mines
- 56.1Mt*
- Australia, Brazil and Guinea

**Alumina**
- 4 alumina refineries
- 8.0Mt*
- Australia, Brazil and Canada

**Energy**
- 7 hydro plants
- 4.1GW
- Supporting our assets in Canada

**Aluminium**
- 14 aluminium smelters, 80% renewables
- 3.1Mt*
- Australia, Canada, Iceland, New Zealand and Oman

*2020 production
The most profitable integrated Aluminium business

Historic supply growth created challenging conditions
Mt

<table>
<thead>
<tr>
<th>Year</th>
<th>RoW</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>24</td>
<td>26</td>
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<td>2015</td>
<td>64</td>
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<tr>
<td>2016</td>
<td>64</td>
<td>12</td>
</tr>
<tr>
<td>2017</td>
<td>64</td>
<td>12</td>
</tr>
<tr>
<td>2018</td>
<td>63</td>
<td>11</td>
</tr>
<tr>
<td>2019</td>
<td>65</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Rio Tinto Market Analysis and peer disclosures

Integrated Upstream¹ EBITDA Margin (%)

Integrated EBITDA Margin & ROCE (%)

¹Upstream assets includes bauxite, alumina and primary metal
Potential for positive structural change in the market from energy and smelting caps in China

Aluminium supply by source (global) Mt

Potential for positive structural change in the market from energy and smelting caps in China

Primary Aluminium supply (China) Mt

Primary Aluminium supply (China) Mt

Renewables include hydropower and other renewables. Non-Renewables include coal, gas, and nuclear.

Sources: Rio Tinto Market Analysis, CRU, IAI.

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New coal-powered smelting likely to be challenged

Total metal required*
Mt

2020 | 88 Mt | 25 Mt | 63 Mt | CAGR: 5.5%
2025 | 111 Mt | 36 Mt | 75 Mt | 3.3%
2030 | 122 Mt | 43 Mt | 79 Mt |

Aluminium smelter all-in cash costs
(Real US$2021 per tonne)

Hydro

2021e | $330/t | 750/t | 770/t | Carbon costs
2030 | $50/t | $100/t | $100/t | Power costs

Coal

2021e | $1,190/t | $1,650/t | 770/t | Carbon costs
2030 | $50/t | $100/t | $100/t | Power costs
2030 | $2,630/t | $3,370/t | 770/t | Other costs

All non-carbon costs are regional weighted averages from CRU, 2021 (long-run uses 2030 costs). Hydro costs are based on a weighted average of Canadian smelters. Coal costs are based on a weighted average of Chinese smelters from Shandong, Shanxi, Xinjiang and Inner Mongolia.

Sources: Rio Tinto Market Analysis, CRU. *Global semi production including melt loss.

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Switching our Australian smelters to renewables

Smelting requires uninterrupted energy, increasing the technical difficulty of a transition without hydro-power...

...but regions with high-quality renewables and a coordinated approach can create value in the transition

Typical energy requirements for large-scale aluminium smelter

1GW hydro OR ~4GW renewables¹ + Firming solutions

World-class solar and wind resources

Ability to create a coordinated solution to support heavy industry transition

Internationally competitive renewables and skilled industrial workforce provides regional advantage. Signed Statement of Cooperation with Queensland Government

¹ Renewables requirements vary by region, mix of wind and solar and system design

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Decarbonising the aluminium supply chain

Already lowest CO₂ emissions

2021 - Total emission tCO₂/t
Producing the lowest CO₂ per tonne

Lowest footprint alumina refinery in the world

Hydrogen calcination

Green hydrogen a substitute to natural gas
Potential to underpin 10% Rio Tinto group-wide decarbonisation

Commercialising ELYSIS™
P1020 metal grade or better
On track for commercial scale technology in 2024

The graph is on an equity basis for Rio Tinto and all the other individual producers
Source: CRU includes direct emissions (Scope 1) and indirect from electricity generation (Scope 2)
Opportunities to leverage our attractive foundation

- Tier 1 bauxite resource with options to expand and improve cost position
- Deep technical and processing expertise
- Growing smelting capacity requires more green power
- Working with customers to meet their specific needs
- Improve capital intensity of future investments
- ELYSIS™ commercial maturity in 2024
- Recycling is an opportunity to enhance our profitability and relevance to customers
Positioned to thrive in a low-carbon environment

**Strong foundation**
- Integrated business with Tier 1 assets
- Advantageous renewables position
- Strong history with world-class technical expertise
- Operational stability

**Clear strategy**
- Accelerate zero carbon, zero waste
- Empowering our people to be the Best Operator
- Optimise capital intensity
- Build strong connections with our partners and stakeholders
- Pursue options for increased profitability or growth

**Attractive future**
- Potential structural change in the market
- ELYSISTM – net zero aluminium smelting
- Switching Australian smelters to renewables
- Long-life Tier 1 resource in bauxite
- Long-life hydropower assets
- Well positioned for North American market

---

**Best operator**

**Impeccable ESG credentials**

**Excel in development**

**Strengthening our social licence**
# Modelling aluminium costs

## Canadian* smelting unit cash** cost sensitivity

<table>
<thead>
<tr>
<th>Input Cost</th>
<th>Impact of $100/t change in cost on H1 2021 Canadian smelting unit cash cost of $1,262/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina (FOB)</td>
<td>$191</td>
</tr>
<tr>
<td>Green petroleum coke (FOB)</td>
<td>$27</td>
</tr>
<tr>
<td>Calcined petroleum coke (FOB)</td>
<td>$36</td>
</tr>
<tr>
<td>Coal tar pitch (FOB)</td>
<td>$8</td>
</tr>
</tbody>
</table>

* Canadian smelters include all fully-owned smelters in Canada (Alma, AP60, Arvida, Grande-Baie, Kitimat, and Latemière), as well as Rio Tinto’s share of the Becancour and Alouette smelters.

** The smelting unit cash costs refer to all costs which have been incurred before casting, excluding depreciation but including corporate allocations and with alumina at market price, to produce one metric tonne of primary aluminium.
Empowering customers with a “nutrition label” for materials

**Demand**
- Growing demand for qualitative information about materials
- Low CO₂ impact and ESG performance production standards (human rights etc.)

**Transparency**
- Transparency from mine to metal
- Points of distinction from provenance to production
- START provides the information consumers demand

**Digital**
- Leverages blockchain
- Distinguish products beyond low CO₂ aluminum offering
- ASI certification provides 11 factors of responsible production

**Brand**
- Goes beyond low CO₂ metal to include multiple factors of ESG product differentiation
- Modern, light brand
- Designed for end-user
ELYSIS zero carbon metal meets new market demand

Scaling up ELYSISTM technology
- ELYSIS has achieved stable cell operation, producing commercial metal grade
- Completed construction of new Industrial R&D Center in Saguenay-Lac-St-Jean for next steps in technology scale-up
- Commissioning in full swing to produce metal at scale similar to small, industrial-sized smelting cells
- Technology expected to reach commercial maturity in 2024

Strong market demand emerging
- **Q3 2020**: Apple’s 16” MacBook Pro is world’s first device manufactured using ELYSIS metal, delivered through Rio Tinto’s commercial network.
- **Q4 2020**: Rio Tinto supplied ELYSIS metal to AB InBev as part of partnership to produce their most sustainable can – piloted with Michelob ULTRA
- **Q2 2021**: Selected our Alma smelter in Saguenay-Lac-Saint-Jean, Quebec, for the first installation and demonstration of its inert anode technology at a commercial size of 450 kiloamperes (kA) and start of construction of the first prototype cells.
Copper
Copper

US, Mongolia and Chile

3 copper operations

$2bn
Underlying EBITDA (H1 2021)

3 copper growth projects
US, Australia and Mongolia

Kennecott and Oyu Tolgoi
first and second copper mines in the world awarded Copper Mark

6,200,000
pounds of copper scrap recycled at our Kennecott copper mine

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Copper

Strong financial results despite COVID-19 and other challenges

### Operating metrics

<table>
<thead>
<tr>
<th></th>
<th>H1 2021</th>
<th>H1 2020 comparison</th>
<th>2021 Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper realised price¹</td>
<td>415c/lb</td>
<td>+ 66%</td>
<td></td>
</tr>
<tr>
<td>Production – mined copper</td>
<td>236kt</td>
<td>- 11%</td>
<td>500-550kt</td>
</tr>
<tr>
<td>Production – refined copper</td>
<td>111kt</td>
<td>+ 50%</td>
<td>210-250kt</td>
</tr>
<tr>
<td>Unit cost²</td>
<td>71c/lb</td>
<td>- 43%</td>
<td>60-75c/lb</td>
</tr>
</tbody>
</table>

### Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020 comparison</th>
<th>2021 Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>3.8</td>
<td>+ 91%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>2.0</td>
<td>+ 199%</td>
<td></td>
</tr>
<tr>
<td>Margin (product group ops)</td>
<td>61%</td>
<td>+ 18pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>1.2</td>
<td>+ 1,132%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.2</td>
<td>+ 47%</td>
<td></td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.5</td>
<td>- 36%</td>
<td></td>
</tr>
<tr>
<td>Free cash flow</td>
<td>0.6</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE³</td>
<td>13%</td>
<td>+ 11 pp</td>
<td></td>
</tr>
</tbody>
</table>

¹Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which positively impacted revenues in the first half by $202mn (first half 2020 negative impact of $26mn).

²Unit costs for Kennecott, OT and Escondida utilises the C1 unit cost calculation where Rio Tinto has chosen Adjusted Operating Costs as the appropriate cost definition. C1 costs are direct costs incurred in mining and processing, plus site G&A, freight and realisation and selling costs. Any by-product revenue is credited against costs at this stage.

³Total Product Group including evaluation projects/other

### Strong recovery in prices of copper, gold, silver and molybdenum

**OT underground** – achieved key technical milestones for undercut despite COVID-19 restrictions. All stakeholders remain committed to moving project forward

**Kennecott (RTK)** - successful relocation of in-pit crusher enables access to additional ore and reduces risk to key mining infrastructure

**RTK** - no injuries nor damage to equipment from anticipated slope failure. Mining in area resumed in June at slightly lower rate than planned

Cost guidance unchanged with higher by-product prices offsetting volumes
Higher prices & volume, albeit impacted by COVID-19

Underlying EBITDA H1 2021 vs H1 2020

$ million

- The improvement in our financial performance was driven by stronger market conditions and higher refined sales volumes, driven by a solid smelter performance at Kennecott and higher gold grades at Oyu Tolgoi. These compensated for lower volumes at Escondida, where ongoing preventive measures in response to the resurgence of COVID-19 continued to impact workforce availability.

- At $2.0 billion, our underlying EBITDA was almost three times higher than 2020 first half.

- The stronger market environment, which rebounded from the impact of the global COVID-19 pandemic, drove underlying EBITDA $1.3 billion higher, with a 66% increase in our realised copper price to 415 US cents per pound, before taking into account the provisional pricing benefit to revenues of $202 million in 2021 first half.

- Our C1 copper unit costs, at 71 cents per pound in 2021 first half, were 43% lower than in 2020 first half. Lower throughput and grades at Escondida and higher royalties, in line with stronger prices, at Kennecott and Oyu Tolgoi were offset by higher production of copper and, in particular, gold at Oyu Tolgoi, driven by higher grades.

- We incurred additional costs related to our response to COVID-19, higher energy costs, notably in the US driven by weather conditions, and higher royalties at Oyu Tolgoi, in line with higher volumes and prices. These were offset by an improvement in refined copper volumes at Kennecott due to the non-recurrence of two significant events in 2020 - the earthquake in March and the planned smelter shutdown that commenced in May.

- Strong cash from our operating activities of $1.2 billion benefited from the same drivers as underlying EBITDA and $0.5 billion higher dividends from Escondida. This was partly offset by a $0.4 billion tax prepayment which was required by the Mongolian Tax Authority and is being disputed by Oyu Tolgoi through international arbitration.

- Free cash flow of $0.6 billion was net of $0.7 billion of capital expenditure, which included ongoing activities at the Oyu Tolgoi underground project and the payment of $0.4 billion tax to the Government of Mongolia in relation to disputed tax items for the period 2013-2018.
## Sector-leading attributes

### Attractive industry fundamentals
- Robust long-term demand
- Constrained supply
- Deficit expected towards end of decade

### Large, high-quality resources
- Long-life, low-cost, expandable assets
- Interests in Tier 1 copper mines

### Multiple, strong growth options
- Medium-term growth potential from Oyu Tolgoi
- Longer-dated optionality at Resolution
- Exploration pipeline, including Winu
Kennecott – a stronger contributor to cash

South wall push back underpins over a decade of high-quality cash flow

Returns to higher grades in 2021

Operational excellence to maximise value
- Overall improvement of ~5% in truck productivity equates to ~12 mt additional material moved
Oyu Tolgoi Underground

Technical progress despite COVID-19 restrictions

Material Handling System 1 is 90% complete; technical criteria achieved to support undercut commencement despite site operating as low as 25% manning levels due to COVID-19

Other milestones are in progress, critical to project delivery

One of the largest block cave mines. Globally competitive safety performance; highest water use efficiency per tonne, 89% average water recycling rate

Talented & committed workforce: 12,000 employees of which 96% are Mongolian nationals

>$12bn spent since 2010, COVID-19 support, 70% of FDI*, 1/3rd of GDP**

*This estimate is at a better than feasibility study level of accuracy. The definitive estimate assumes restrictions in 2021 that are no more stringent than those experienced in September 2020. Mongolia implemented further restrictions at the end of 2020 in response to a re-emergence of COVID-19. Should COVID-19 constraints be maintained at December 2020 levels, escalate further in 2021 leading to tougher restrictions, or continue beyond 2021, additional costs and schedule impacts will arise. **Foreign direct investment *Gross domestic product
Oyu Tolgoi delivers substantial economic value to Mongolia

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

**Jobs:** Country’s largest private-sector employer, workforce of 12,000 is 96% Mongolian

**Taxes:** Since 2010, OT has spent US$12.7bn in-country in the form of salaries, payments to Mongolian suppliers, taxes and other payments to the Government of Mongolia.

Since 2010, OT has paid US$3.4bn in taxes, fees and other payments.

**Local spend:** $3.7bn on national procurement spend since 2010; National procurement spend reached 72% of total spend in 2020. 770 suppliers of which 499 are national businesses.

Source: World bank

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Resolution Copper: potential to produce up to 25% of US copper demand; critical to a low carbon future

We are continuing to work with the US Forest Service to review the Final Environmental Impact Statement (EIS) and draft Record of Decision. Mine studies continue to progress in parallel.

More than $2bn has been spent on the project from voluntary reclamation, sinking a second shaft, rehabilitating the existing shaft and deepening to mining depth, ore body study and evaluation, and the federal approval and public engagement.

We are committed to ongoing stakeholder engagement in our effort to seek consent from Native American Tribes consistent with the International Council on Mining and Metals (ICMM) Statement on Indigenous Peoples and Mining.

Resolution Copper has the potential to produce up to 25% of US copper demand each year, a critical step toward delivering a low-carbon future. The project has the potential to create approximately 3,700 direct and indirect jobs in Arizona process.

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Significant Paterson footprint with potential beyond Winu

Extensive portfolio of 100% owned tenure, majority owned joint venture (JV) tenure, and active earn-in opportunities

Continue to actively engage with the Traditional Owners and we plan to commence discussions on the initial scope and mine design, also in consultation with the Western Australian Environmental Protection Authority

Testing potential to leverage regional synergies with the Winu development

Sanction now targeted for next year and first production in 2025 partly due to COVID-19 constraints. Drilling, fieldwork and study activities continue to progress
We are committed to the Simandou project and Guinea

One of the world’s largest untapped and richest high-grade iron ore deposits, located in Guinea

High-grade ores can support the transition to lower-carbon steel

Strengthens Rio Tinto’s iron ore portfolio as well as our product offering

Complements Rio Tinto iron ore operations in the Pilbara, Western Australia

Competitively positioned as a mid-ranking producer on the cost curve

Diversifies and strengthens the economy of Guinea and local communities

There are factors coming together now to support its development with or without Rio Tinto
Non-managed 30% interest in Escondida

Escondida

Strong cash flows underpin dividends of $0.6bn in 2020

No additional significant capex required for near future

Desalination plant operating well

Transition to renewable based contracts in 2021
Minerals
Minerals

Canada, Madagascar, South Africa, the US and China

6 mining sites

5 countries

8 processing plants

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

$1.4bn
Underlying EBITDA (H1 2021)

Jadar
Ranked as one of the most significant, high-grade lithium deposits in the world

*EBITDA reflects results of former Product Group, Energy & Minerals

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Minerals

Strong demand across all products especially high grade iron ore

Operating metrics | H1 2021 | H1 2020 comparison | 2021 guidance
---|---|---|---
IOC pellets price¹ | $218/t | + 86% | 
TiO₂ slag price² | $782/t | - 1% | 
Production – IOC | 5.1Mt | - 5% | 10.5-12.0Mt
Production – TiO₂ | 0.6Mt | + 4% | N/A³
Production – Borates | 0.2Mt | - 4% | ~0.5Mt
Production – Diamonds | 1.9Mct | + 2% | 3.0-3.8Mct⁴

Financial metrics ($bn)
---
Revenue | 3.3 | + 41% |
EBITDA | 1.4 | + 96% |
Margin (product group ops) | 46% | + 13 pp |
Operating cash flow | 0.6 | + 47% |
Sustaining capex | 0.2 | + 25% |
Replacement and growth capex | 0.1 | + 133% |
Free cash flow | 0.4 | + 50% |
Underlying ROCE⁵ | 19% | + 11 pp |

$2.4bn commitment to fund Jadad. Low cost, long life asset, entry into battery materials at scale

IOC - prices boost financials but labour and equipment availability impacted production

RBM significantly hampered by security issues. Operations ceased until safety of our people and assets can be guaranteed

QMM in Madagascar operating well delivering consistent production

Borates: robust demand for products. Diavik: strong price recovery during Q2

¹Wet metric tonne | ²TZMI chloride slag assessment average for the first half estimate, excluding UGS | ³Full year titanium dioxide slag production guidance has been removed as a result of risks around the timing of resumption of operations due to an escalation in the security situation at our Richards Bay Minerals operation in South Africa | ⁴2021 diamonds guidance is for Diavik only following the closure of Argyle in 2020 | ⁵Total Product Group including evaluation projects/other
Minerals
Strong pricing across portfolio supports EBITDA

Underlying EBITDA H1 2021 vs H1 2020
$ million

- The business was generally stable from an operational perspective, while continuing to comply with government-imposed COVID-19 restrictions, notably in Canada.

- The one significant exception was at Richards Bay Minerals (RBM) in South Africa where operations were significantly hampered by a deterioration in the security situation. As a result, we declared force majeure on 30 June, with the cessation of mining activities and curtailment of the smelter.

- On 21 July, we announced that we would shut one of the four furnaces due to depletion of available feedstock. We continue to work with national and provincial governments as well as community structures to find a lasting solution to the current situation. However, if the situation does not improve, then we could be forced to progressively shut down the other furnaces by the end of August.

- At IOC, force majeure declared in April was lifted 9 weeks later following the temporary cessation of ship loading due to a fire in March at one shiploader when the second shiploader was undergoing planned maintenance activities.

- Underlying EBITDA of $1.4 billion was almost double 2020 first half, primarily reflecting a $0.9 billion benefit from higher pricing across the portfolio, with prices achieved for iron ore pellets and concentrates for sale being the main contributor.
A lean, scalable operating model running cash-focused businesses

<table>
<thead>
<tr>
<th>Borates</th>
<th>IOC</th>
<th>TiO₂</th>
<th>Diavik</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic focus</strong></td>
<td>Integrated mine-to-market business model</td>
<td>Cost and productivity improvements</td>
<td>Value over volume operating philosophy</td>
</tr>
<tr>
<td><strong>Key customer segments</strong></td>
<td>Multiple end products including construction, agriculture &amp; consumer products</td>
<td>Premium quality pellets and concentrates to steel producers</td>
<td>Pigment producers, ceramics and titanium industry</td>
</tr>
<tr>
<td><strong>Competitive advantages</strong></td>
<td>Commercial excellence driven by market insight Creating new demand through technical expertise</td>
<td>Large ore reserve Installed capital base Premium quality pellets</td>
<td>Wide range of TiO₂ feedstock options Significant co-product contributions</td>
</tr>
<tr>
<td><strong>2020 margins</strong></td>
<td>22% EBITDA margin</td>
<td>46% EBITDA margin</td>
<td>29% EBITDA margin</td>
</tr>
</tbody>
</table>

See Mine & production facilities details in the Rio Tinto Fact Book addendum on [https://www.riotinto.com/invest](https://www.riotinto.com/invest)
Strengthening our portfolio with commitment to fund Jadar

Continue to work closely with stakeholders in Serbia. Subject to award of final permits and approvals, construction will commence in 2022, with first saleable production expected in 2026.

Capital investment expected to be $2.4bn; Low cost (1st quartile), long life (~40 years)

Full ramp-up expected in 2029 to ~58kt of battery-grade lithium carbonate\(^1\), 160kt of boric acid \((\text{B}_2\text{O}_3\) units) and 255kt of sodium sulphate\(^2\). 25-35% p/a demand growth over next 10 years.

Jadar could supply all necessary lithium carbonate for 71 GWh of batteries, powering over one million EVs per year\(^3\)

1% direct and 4% indirect contribution to GDP of Serbia. ~2,100 jobs in construction and 1,000 ongoing jobs when operational.

\(^1\)This production target was previously reported at 55,000 tonnes of battery grade lithium carbonate in a release to the ASX dated 10 December 2020, “Rio Tinto declares maiden Ore Reserve at Jadar”. All material assumptions underpinning the production target continue to apply and have not materially changed | \(^2\)These production targets were previously reported in a release to the ASX dated 10 December 2020, “Rio Tinto declares maiden Ore Reserve at Jadar”. All material assumptions underpinning the production targets continue to apply and have not materially changed. | \(^3\)Assuming 60kWh battery size

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Jadar project – 100% owned and managed

Mining and processing
Underground mine using bench stoping
Co-located beneficiation and chemical processing plant
Primary products: lithium carbonate, boric acid
Overall product recoveries: ~80%

Capex
Capital: $2.4bn (nominal)
Construction phase: 2021-2026 (peak 2022-2025)
LOM sustaining capital: $30m per year, average (real)

Production profile¹
First saleable production: 2026
Full ramp-up: 2029
Annual target volumes: up to 58,000 tonnes of battery-grade lithium carbonate, 160,000 tonnes of boric acid (B₂O₃ units) and 255,000 tonnes of sodium sulphate per annum

Serbian tax and royalties
Mining royalty: 5% (levied on gross sales minus allowable deductions)
Corporate income tax rate: 15%
Withholding tax rate: 5%

40 year mine life
Ore reserve:
16.6Mt @ 1.8% Li₂O and 13.4% B₂O₃
Mineral resource:
139.2Mt @ 1.8% Li₂O and 14.7% B₂O₃

First quartile costs
Dry stacked tailings solution
Electric haul trucks
70% water recycling
~2,100 direct jobs during construction
>1,000 ongoing jobs when operational

¹ Continuing to work closely with stakeholders in Serbia. Subject to award of final permits and approvals.
² These production targets were previously reported in a release to the Australian Securities Exchange (ASX) dated 10 December 2020, “Rio Tinto declares maiden Ore Reserve at Jadar” (for battery-grade lithium carbonate it was 55,000 tonnes). All material assumptions underpinning the production targets continue to apply and have not materially changed.
³ These resources and reserves were previously reported in the Rio Tinto Annual Report 2020. The material assumptions on which they were based have not materially changed.
Exploration, Closure, Technical & Projects
Exploration

400+ explorers

Exploring for 7 commodities
in 17 countries

$625M spent on exploration and evaluation in 2020

Advanced stage exploration projects
in Australia, Canada, Mongolia, United States, Tanzania, Zambia, and Kazakhstan
High quality ore bodies and low cost renewable power are our sources of sustainable competitive advantage and….

Through various economic and societal cycles, technology investment has been core to our sustained performance and growth

At Kennecott, technology investment allowed increased throughput and maintenance of recovery rates despite declining grades

In the Pilbara, our autonomous trucks operate at 15% lower cost than manned and our autonomous drills are 25% more productive

In Canada, our technology has the lowest emission levels and is 40% more productive than any previous smelting technology
An upstream and downstream technology portfolio aligned to the five strategic themes

- Safety
- ESG
- Growth
- Carbon
- Productivity
Innovation

We use advanced technology and some of the best minds in the business to maximise value.

Auto Haul™
The world’s largest automated heavy haul rail network

World’s largest autonomous drill fleet (Pilbara, Australia)

ELYSIS™
Pathway to carbon free aluminium smelting

Gudai-Darri
Set to be our most technologically advanced mine

Li from waste
Producing battery grade lithium from waste rock at Boron
Smart mining

Data is one of our most valuable assets

**MAS**
Our Mine Automation System pulls together data at 98% of our sites

**>130**
autonomous trucks, part of our Autonomous Haulage System

**1700**
people using RTVis™ at 98% of our mines

**94%**
reduction in lost production time for our ore crushers in Western Australia

**>4,000**
vehicles across our 60 global operations tracked, 24 hours a day
Data analytics and AI lowers cost and drives productivity

Copper head grade prediction

Reducing materials handling down time

Forecasting ship arrivals

Real-time chemistry increasing Cu recovery

~40% reduction in materials handling down time

Enable the reduction of demurrage costs

Global replication opportunity

Global replication opportunity

Global replication opportunity

Targeted head grade prediction is from Rio Tinto Kennecott. Materials handling downtime results are from Hope Downs 1.
Industry-leading exploration technology delivering results

Sophisticated proprietary tools & techniques
- "Greenrocks"
- Geochronology & Fertility
- Automated Mineralogy
- Predictive Analytics
- New models

Rapid application of new technologies
- Drones
- Hyperspectral Imaging
- Data in the field
- Search Analytics

FalCon™Winu

Discovered by applying new insights to public and proprietary data to improve our targeting techniques

Novel adaptation of existing technology accelerating definition of the orebody

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Assets transitioning to closure

Argyle Diamond Mine*
Western Australia (2020)

Ranger uranium mine*
Northern Territory, Australia (2021)

Diavik Diamond Mine*
Northwest Territories, Canada (2025)

Gove*
Northern Territory, Australia (2030)

$13bn total closure provisions**

*Dates based on current mine plans **As at 31 Dec 2020. See further information, including the composition of the provision by cost category and by geography, on pages 244-245 of our 2020 Annual Report.
Tailings storage facilities

• In August 2020, all ICMM members including Rio Tinto committed to implement the Global Industry Standard on Tailings Management (GISTM).

• All tailings facilities operated by Rio Tinto with “Extreme” or “Very high” potential consequences will be in conformance with the Standard by 5 August 2023.

• We have reviewed all our relevant standards, which are well aligned with the GISTM.

• We use our standard for the management of tailings and water storage facilities at 108 tailings storage facilities (TSFs) at our assets globally. There are a further 50 TSFs at non-managed sites. In total, there are 65 active TSFs, 40 are inactive and 53 are closed.

• For non-managed sites with tailings facilities, we actively participate in technical committees in an advisory capacity with our joint venture partners. Each of the technical committees has a Tailings Steering Committee, or equivalent, to support the effective management of tailings.

Further information can be found on our website https://www.riotinto.com/sustainability/environment/tailings

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Three levels of assurance for managing tailings and water storage

1st level
- Site processes
  - Effective design, inspection and monitoring

2nd level
- Surface Mining Centre of Excellence
  - Technical risk reviews

3rd level
- Audit

Audit of control effectiveness
Group Internal Audit working with external auditors
Assures systems for risk management, internal control and governance are effective

Group review
Assurance to the Rio Tinto Standard
Business conformance audits and HSEC reviews
Review by subject matter experts external to the asset

Operations management
Effective facility design (Engineer of Record / Design Engineer)
Comprehensive operational controls
Independent external review undertaken at least every two years
Financial information & policies
Shareholder returns policy

Balanced capital allocation

Maintain an appropriate balance between:
– Investment in compelling growth projects
– Total shareholder cash returns of 40-60% of underlying earnings through the cycle

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

Supplement ordinary dividends with additional returns in periods of strong earnings and cash generation
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>A2</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.
Debt maturity profile
30 June 2021 pro-forma debt maturity profile*

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

No corporate bond maturities until 2024

Liquidity remains strong under stress tests

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

*Numbers based on June 2021 accounting value. The debt maturity profile shows $1.1 billion of capitalised leases under IFRS 16. The June 2021 debt profile adjusted to reflect the October 2021 capital market transaction. This includes the 2.75% November 2051 bond issued in October 2021. As part of the same transaction, the profile excludes the 3.75% June 2025 bond tendered in October 2021, following which, notice has been given for its full redemption due for settlement 3 December 2021.
# Modelling EBITDA

## Underlying EBITDA sensitivity

<table>
<thead>
<tr>
<th></th>
<th>Average published price/exchange rate for 2021 first half</th>
<th>US$ million impact on full year 2021 underlying EBITDA of a 10% change in prices/exchange rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>413c/lb</td>
<td>478</td>
</tr>
<tr>
<td>Aluminium</td>
<td>$2,245/t</td>
<td>784</td>
</tr>
<tr>
<td>Gold</td>
<td>$1,805/oz</td>
<td>77</td>
</tr>
<tr>
<td>Iron ore realised price (62% Fe CFR freight-adjusted)</td>
<td>$168.4/dmt</td>
<td>4,180</td>
</tr>
<tr>
<td>A$</td>
<td>0.77US$</td>
<td>665</td>
</tr>
<tr>
<td>C$</td>
<td>0.80US$</td>
<td>249</td>
</tr>
<tr>
<td>Oil (Brent)</td>
<td>$65/bbl</td>
<td>112</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

### Alumina

<table>
<thead>
<tr>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonquiere</td>
<td>100.0 Canada Full consolidation</td>
</tr>
<tr>
<td>Queensland Alumina</td>
<td>80.0 Australia Proportional consol</td>
</tr>
<tr>
<td>Sao Luis (Alumar)</td>
<td>10.0 Brazil Proportional consol</td>
</tr>
<tr>
<td>Yarwun</td>
<td>100.0 Australia Full consolidation</td>
</tr>
</tbody>
</table>

### aluminium (cont'd)

<table>
<thead>
<tr>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiwai Point (NZAS)</td>
<td>79.4 New Zealand Proportional consol</td>
</tr>
<tr>
<td>Tomago</td>
<td>51.6 Australia Proportional consol</td>
</tr>
</tbody>
</table>

### Bauxite

<table>
<thead>
<tr>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gove</td>
<td>100.0 Australia Full consolidation</td>
</tr>
<tr>
<td>Porto Trombetas (MRN)</td>
<td>12.0 Brazil Equity accounted unit</td>
</tr>
<tr>
<td>Sangaredi (note 1)</td>
<td>23.0 Guinea Equity accounted unit</td>
</tr>
<tr>
<td>Weipa</td>
<td>100.0 Australia Full consolidation</td>
</tr>
</tbody>
</table>

### Borates

<table>
<thead>
<tr>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boron</td>
<td>100.0 US Full consolidation</td>
</tr>
</tbody>
</table>

### Copper

<table>
<thead>
<tr>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escondida</td>
<td>30.0 Chile Equity accounted unit</td>
</tr>
<tr>
<td>Kennecott</td>
<td>100.0 US Full consolidation</td>
</tr>
<tr>
<td>Oyu Tolgoi</td>
<td>33.5 Mongolia Full consolidation</td>
</tr>
<tr>
<td>Turquoise Hill Resources (TRQ)</td>
<td>50.8 Canada Full consolidation</td>
</tr>
<tr>
<td>Resolution</td>
<td>55 US Full consolidation</td>
</tr>
<tr>
<td>Minerals</td>
<td>%</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----</td>
</tr>
<tr>
<td>Diamonds</td>
<td></td>
</tr>
<tr>
<td>Argyle Diamonds</td>
<td>100.0</td>
</tr>
<tr>
<td>Diavik Diamonds</td>
<td>60.0</td>
</tr>
<tr>
<td>Iron ore (cont’d)</td>
<td></td>
</tr>
<tr>
<td>Brockman (2 and 4)</td>
<td>100.0</td>
</tr>
<tr>
<td>Eastern Range JV (note 2)</td>
<td>54.0</td>
</tr>
<tr>
<td>Hope Downs JV (1 and 4)</td>
<td>50.0</td>
</tr>
<tr>
<td>Iron Ore Company of Canada (IOC)</td>
<td>58.7</td>
</tr>
<tr>
<td>Marandoo</td>
<td>100.0</td>
</tr>
<tr>
<td>Mt Tom Price</td>
<td>100.0</td>
</tr>
<tr>
<td>Nammuldi</td>
<td>100.0</td>
</tr>
<tr>
<td>Pannawonica (Mesas J and A)</td>
<td>53.0</td>
</tr>
<tr>
<td>Paraburdoo</td>
<td>100.0</td>
</tr>
<tr>
<td>Salt</td>
<td></td>
</tr>
<tr>
<td>Dampier Salt</td>
<td>68.4</td>
</tr>
<tr>
<td>TiO₂ feedstocks</td>
<td></td>
</tr>
<tr>
<td>RTFT mine and smelter</td>
<td>100.0</td>
</tr>
<tr>
<td>QMM mine</td>
<td>80.0</td>
</tr>
<tr>
<td>Richards Bay Minerals</td>
<td>74.0</td>
</tr>
<tr>
<td>Uranium</td>
<td></td>
</tr>
<tr>
<td>Energy Resources of Australia (ERA)</td>
<td>68.4</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

*Note: only selected transactions are shown.*
# Principal corporate activity 2013 to 2017

## 2013
- Sale of Eagle $315m
- Sale of Palabora Mining Corporation $373m
- Sale of Northparkes $820m
- Sale of Altynalmas 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

*Note: only selected transactions are shown. Based on amounts announced in Rio Tinto media releases: may vary from Cash Flow Statement due to timing, completion adjustments and exchange rates.*
Principal corporate activity 2018 to 2020

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

Note: only selected transactions are shown. Based on amounts announced in Rio Tinto media releases: may vary from Cash Flow Statement due to timing, completion adjustments and exchange rates.
Maintaining our rigorous approach to investments

- Controlled risk taking allows for more opportunities
- Using a range of criteria across different investment opportunities
- Integrity: Rigorous assessment of options
  - Decarbonisation: Capital intensity of CO₂ reduction | Cost of capital
  - Growth: Embedded options | Cost position | Valuation
  - M&A: Embedded options | Cost position | Strategic fit | Right owner | Valuation

Diagram:
- Final decision
- Investment themes
- Commodity which enable the energy transition | Decarbonisation
- Independent Economics team sets prices (including carbon), global scenarios and discount rates
- Evaluation criteria
  - Scenario based NPV, IRR, payback ranges
  - Detailed Risk assessment (including ESG)
- Independent business and technical teams
  - Evaluation committee
- Product Group level governance and investment committees
  - Opportunity development
  - Project review
  - Set ranking criteria
  - Investment Committee
  - Board
# Ongoing major capital projects

<table>
<thead>
<tr>
<th>All numbers on 100% basis (US$)</th>
<th>Approved capital cost</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper</strong> - Investment to extend mine life at Rio Tinto Kennecott, US beyond 2019</td>
<td>$0.9bn</td>
<td>Funding for the continuation of open pit mining via the push back of the south wall: the project largely consists of simple mine stripping activities.</td>
</tr>
<tr>
<td><strong>Copper</strong> - Further investment to extend mine life at Rio Tinto Kennecott, US by a further six years to 2032</td>
<td>$1.5bn</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.</td>
</tr>
<tr>
<td><strong>Copper</strong> – Development of the Oyu Tolgoi underground copper/gold mine in Mongolia (Rio Tinto 34%), which is expected to produce 480,000 tonnes of copper per year on average from 2028 to 2036 (open pit and underground), compared with 149,600 tonnes in 2020 (open pit).</td>
<td>$6.75bn&lt;sup&gt;2&lt;/sup&gt;</td>
<td>The project was originally approved in May 2016 for $5.3bn, with an additional $1.45 billion approval by the Rio Tinto Board in December 2020, following completion of the definitive estimate. Sustainable production for Panel 0 is expected to be achieved by October 2022.&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Aluminium</strong> – Investment in a second tunnel at the 1000MW Kemano hydropower facility at Kitimat, British Columbia, Canada. The project will ensure the long-term reliability of the power supply to the modernised Kitimat smelter.</td>
<td>$0.6bn</td>
<td>The project was approved in 2017, with $155 million of additional capital approved in 2020. It was impacted by the departure of the main contractor in the first half of 2020. Tunnel excavation works restarted in September. However, due to the escalation of COVID-19 in the province, tunnel excavation works have been interrupted. We expect to restart late in the first quarter of 2021.</td>
</tr>
</tbody>
</table>

---

1. This production target (stated as recovered metal) for the Oyu Tolgoi underground and open pit mines was previously reported in a release to the market on 16 December 2020 (market release). All material assumptions underpinning the production target continue to apply and have not materially changed.

2. These estimates include the known impacts of COVID-19. The definitive estimate assumes restrictions in 2021 that are no more stringent than those experienced in September 2020. Mongolia implemented further restrictions at the end of 2020 in response to a re-emergence of COVID-19. Should COVID-19 constraints be maintained at December 2020 levels, escalate further in 2021 leading to tougher restrictions, or continue beyond 2021, additional costs and schedule impacts will arise.
# Ongoing major capital projects

All numbers on 100% basis (US$)

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Approved capital cost</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron ore</strong> — Investment in West Angelas and the Robe Valley in the Pilbara region of Western Australia to sustain production capacity.</td>
<td>$0.8bn (RT share)</td>
<td>Approved in October 2018, the investments will enable us to sustain production of our Pilbara Blend— and Robe Valley products. All approvals have been received. Construction activities are progressing to plan with first ore expected in 2021.</td>
</tr>
<tr>
<td><strong>Iron ore</strong> — Investment in Gudai-Darri (formerly Koodaideri), a new production hub in the Pilbara region of Western Australia, to sustain existing production in our iron ore system.</td>
<td>$2.6bn</td>
<td>Approved in November 2018, the investment incorporates a processing plant and infrastructure including a 166-kilometre rail line connecting the mine to our existing network. Key construction activities are on schedule and we expect production to ramp up in 2022. Once complete, the mine will have an initial annual capacity of 43 million tonnes.</td>
</tr>
<tr>
<td><strong>Iron Ore</strong> - Investment in the Greater Tom Price operations to help sustain production capacity.</td>
<td>$0.8bn</td>
<td>Approved in November 2019, the investment will facilitate mining of existing and new deposits. It includes construction of a new crusher and a 13-kilometre conveyor. First ore from the crusher is expected in 2021.</td>
</tr>
<tr>
<td><strong>Mineral sands</strong> - Development of the Zulti South project at Richards Bay Minerals (RBM) in South Africa (Rio Tinto 74%), to sustain current capacity and extend mine life.</td>
<td>$0.5bn</td>
<td>Approved in April 2019, the investment will underpin RBM’s supply of zircon and ilmenite over the life of the mine. Construction remains on full suspension, pending normalisation of operations.</td>
</tr>
</tbody>
</table>
Shareholder structure

23% Rio Tinto Limited
Shares outstanding: 0.371bn

77% Rio Tinto PLC
Shares outstanding: 1.247bn

100% Rio Tinto DLC
Shares outstanding: 1.619bn

*21 September 2021
Governance
The team

Bold Baatar, Chief Executive Rio Tinto Copper

Alf Barrios Chief Commercial Officer

Peter Cunningham Chief Financial Officer

Mark Davies Chief Technical Officer

Isabelle Deschamps Chief Legal Officer & External Affairs

Sinead Kaufman Chief Executive Rio Tinto Minerals

James Martin Chief People Officer

Kellie Parker Chief Executive Australia

Arnaud Soirat Chief Operating Officer

Jakob Stausholm Chief Executive

Simon Trott Chief Executive Rio Tinto Iron Ore

Ivan Vella Chief Executive Rio Tinto Aluminium

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## Rio Tinto Board – diverse experience

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Sector experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Simon Thompson</td>
<td>Mining – former executive director at Anglo American and investment banking with NM Rothschild and SG Warburg.</td>
</tr>
<tr>
<td>Executive Director</td>
<td>Jakob Stausholm</td>
<td>CEO from 1 January 2021, and previously CFO from 3 September 2018 as an executive director. He has over 20 years’ experience working in senior finance roles in Europe, Latin America and Asia. He was Group CFO and an executive director of A.P. Moeller – Maersk A/S and Chief Financial, Strategy &amp; Transformation Officer for the Transport &amp; Logistics division from December 2016 until March 2018, having joined the Maersk Group in 2012. From 2008 to 2011 he was Group CFO of the global facility services provider ISS A/S and he was a non-executive director of Statoil ASA from 2009 to 2016 and of Woodside Petroleum from 2006 to 2008. Before that, he spent over 19 years with Royal Dutch Shell in numerous finance positions globally and as Chief Internal Auditor for the group.</td>
</tr>
<tr>
<td>Executive Director</td>
<td>Peter Cunningham</td>
<td>Appointed CFO and Executive Director in June 2021, after serving as Interim Chief Financial Officer for a short period of time. Over the last three decades, he has held a number of senior financial and non-financial leadership positions across Rio Tinto in Australia and the UK. These include Group Controller, Chief Financial Officer – Organisational Resources, Global Head of Health, Safety, Environment &amp; Communities, Head of Energy and Climate Strategy, and Head of Investor Relations.</td>
</tr>
<tr>
<td>Role</td>
<td>Name</td>
<td>Sector experience</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Non-executive Directors</td>
<td>Megan Clark</td>
<td>Metals &amp; mining, science, research &amp; technology - chief executive of Australia’s national research agency. Chair of the Sustainability committee.</td>
</tr>
<tr>
<td></td>
<td>Hinda Gharbi</td>
<td>Executive vice president of Reservoir &amp; Infrastructure at Schlumberger Limited. 24 years’ experience for Schlumberger working in various engineering, functional and line management positions. Joined the Board in March 2020.</td>
</tr>
<tr>
<td></td>
<td>Simon Henry</td>
<td>Oil and Gas – former chief financial officer of Royal Dutch Shell. Also a non-executive director of Lloyds Banking Group. Chair of the Audit committee</td>
</tr>
<tr>
<td></td>
<td>Sam Laidlaw</td>
<td>Energy industry background, former CEO of Centrica plc. Non-executive director of HSBC Holdings plc and chairman of Neptune Oil &amp; Gas. Chair of remuneration committee. Senior independent director.</td>
</tr>
<tr>
<td></td>
<td>Jennifer Nason</td>
<td>30 years’ of experience in corporate finance and capital markets. For the past 17 years, she has led the Technology, Media and Telecommunications global client practice at JP Morgan. Director of the American Australian Association. Joined the Board in March 2020.</td>
</tr>
<tr>
<td></td>
<td>Ngaire Woods</td>
<td>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. Board member of the Stephen A. Schwarzman Education Foundation and Trustee of the Rhodes Trust. Appointment effective 1 September 2020.</td>
</tr>
</tbody>
</table>