

Pathway to net zero

2021 progress report



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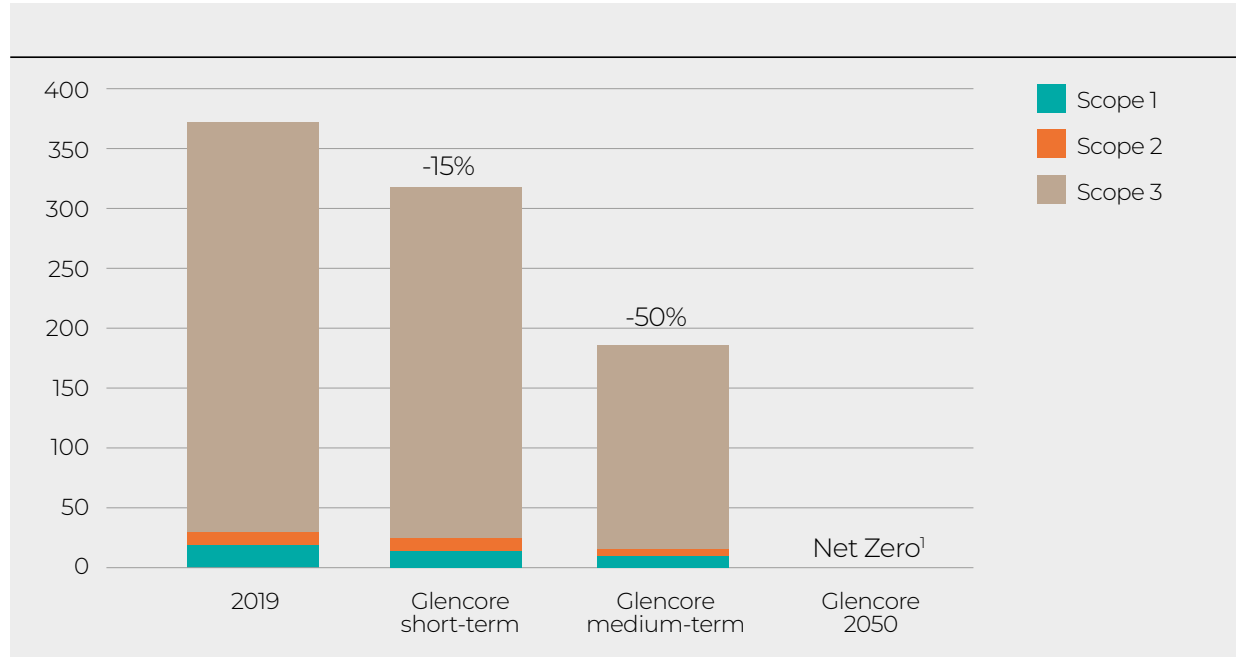
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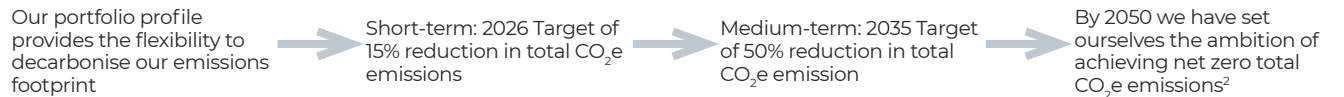
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Our pathway to net zero



¹ Net Zero in 2050 includes the use of offsets for the residual hard to abate emissions

Our decarbonisation pathway



² Coordinated government policies, including incentives to drive accelerated uptake of lower carbon and decarbonisation technologies, and market based regulations governing industrial practices that drive a competitive, least cost emissions reduction approach, are critical to our ability to achieve our ambition of net zero total emissions by 2050

TCFD

We support the Task Force on Climate-related Financial Disclosures' (TCFD) voluntary framework for the reporting of climate-related financial risk disclosures for use by lenders, insurers, investors and other stakeholders. Throughout this report, 'TCFD' is used to highlight content relevant to its disclosure recommendations. We believe this report to be compliant with the expectations embedded in the TCFD framework.



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Chief Executive's introduction



“The metals and minerals we produce enable the transition to a low-carbon economy.”

Gary Nagle
Chief Executive Officer

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Our position on climate change
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Delivering our ambition
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I am delighted to introduce my first Glencore Climate Report as chief executive. I have been involved in our strategic approach to climate change for a number of years – through my membership of our original Climate Change Working Group and now leading our new Climate Change Taskforce (CCT). The CCT is accountable to our Board and oversees our climate strategy and progress against our climate commitments.

Through the CCT, I am overseeing the implementation of the climate strategy we introduced in December 2020, and monitoring the Group's progress against the seven pathways to delivering our targets and net zero ambition.

Demand for our commodities

We believe that future demand growth for metals and minerals will be heavily driven by the global response to climate change.

All potential decarbonisation pathways require significantly more non-fossil fuel commodities. In particular, market drivers are likely to respond to the widespread adoption of renewable energy sources implemented as a means of decarbonising global energy supply. This demand will favour the commodities that currently underpin the infrastructure and battery chemistry required to power electric vehicles and energy storage systems.

We are a significant producer and recycler of these metals (copper, cobalt, nickel, zinc, silver and vanadium).

As a major supplier of energy and mobility transition metals, our portfolio is well-placed to respond to current and future demand and to meaningfully contribute to decarbonisation efforts.

We continue to monitor our portfolio's resilience against various scenarios.

Progress during the year

During 2021 we progressed the identification of carbon abatement opportunities across the portfolio and significantly expanded our Marginal Abatement Cost Curve (MACC). We further assessed the impact of carbon prices on the industry cost structure across each of our major commodity businesses and incorporated the results into our resilience analysis.

As a result of further work done on understanding our emissions profile and the opportunities to deliver reductions, we revised our medium-term emissions reduction target and introduced a new short-term target. We are committed to reducing our total emissions (Scope 1, 2 and 3) by 15% by 2026 and 50% by 2035, both on 2019 levels. Post 2035, our ambition is to achieve net zero total emissions by 2050, with a supportive policy environment.



Our targets and ambition reflect our commitment to align our business strategy with the goals of the Paris Agreement. We recognise there are multiple pathways to decarbonise our business, including through asset disposals. Our strategy of responsibly depleting our coal portfolio over time reflects our belief that we remain the best steward for these assets and that coal will be required to support meeting global energy needs in the short term.

Engaging with our shareholders

We value the ongoing constructive dialogue we have built with the investor group Climate Action 100+ (CA100+). CA100+ was established in 2017 as a five-year initiative to support the 167 highest-emitting listed companies in the world to align with the goals of the Paris Agreement. We consider the advice and insights of CA100+ in developing our climate strategy.

In Appendix Two, we have referenced our climate-related disclosures against the reporting requirements of CA100+'s

Net Zero Company Benchmark (the Benchmark), which determines individual company's net zero alignment.

In 2021, CA100+ undertook Glencore's first assessment against the Benchmark and acknowledged the progress we have made in achieving positive scores for our net-zero commitment and targets.

As the Benchmark continues to evolve, we will maintain our engagement activities with both the CA100+ and other investor bodies such as the Institutional Investors Group on Climate Change (IIGCC).

We recognise that there is significant movement underway to strengthen and standardise accounting of climate-related risks and opportunities, including efforts by the IFRS Foundation. We also welcome the evolving scrutiny that a number of organisations are now providing on how corporates report and communicate on the impact of climate change on business resilience, as well as setting and progressing emission reduction targets.

In addition to CA100+, many of our shareholders have expressed the importance that they attach to climate change and their expectation for Glencore to align its business strategy with the goals of the Paris Agreement. At our 2021 AGM, we provided our shareholders with their first advisory vote on our three-yearly climate action transition plan. 94.4% of our shareholders voted in favour of this plan. Going forward, at each AGM, shareholders will have an advisory vote on our three-yearly climate action transition plan and its intervening progress reports, of which this report is the first one.

As the named executive for driving strategy relating to climate within our Board, relevant performance indicators have been added to my remuneration package. Of the scorecard that will be used for setting my annual variable compensation, 15% is reserved for indicators that chart our progress towards our short- and medium-term absolute emission reduction targets.

COP26

We welcome the Glasgow Climate Pact that was agreed as a result of the COP26 proceedings earlier this year. The Pact signals a continued ambition to keep the average rise in global temperatures to below 1.5C. The commitment to phase down the use of fossil fuels is consistent with our strategy of responsibly depleting our coal portfolio over time, as we prioritise investment in metals needed for the transition.

I look forward to continuing engagement with our stakeholders as we continue to implement our strategy and as it evolves over the coming years to respond to the global challenge of climate change.



Gary Nagle
Chief Executive Officer



Our position on climate change

As one of the world's largest diversified natural resource companies, Glencore has a key role to play in enabling the global transition to a low carbon economy.

We recognise climate change science as set out by the United Nations Intergovernmental Panel on Climate Change (IPCC). We support the global climate change goals outlined in the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.

We believe that only through collective inclusive action can the world achieve the goals of the Paris Agreement and

limit the impact of climate change. The global response to climate change should pursue twin objectives: limiting temperatures in line with the goals of the Paris Agreement and supporting the United Nations Sustainable Development Goals, including universal access to affordable energy.

The world requires a global transformation of energy, industrial and land-use systems to achieve these goals. We believe this transition is a key part of the global response to the increasing risks posed by climate change.

In response to the ongoing decarbonisation of energy and the electrification of key sectors, including mobility and its associated infrastructure, we expect demand to grow exponentially for renewable energy technologies, and the metals and minerals required to build them.

As one of the largest diversified natural resource companies in the world, we can support the delivery of these goals by producing, recycling, marketing and supplying the metals and minerals that are essential to the transition to a low-carbon economy and to meeting the needs of everyday life.

We recognise the need for action. We are committed to reducing our total emissions (Scope 1, 2 and 3) by:

- 15% by 2026 on 2019 levels; and
- 50% by 2035 on 2019 levels¹

We use the IPCC scenarios to illustrate our compliance with the net zero ambition. Our 2026 target lies within the range of IPCC 1.5 degree scenarios² and our 2035 target is aligned to the IEA NZE 2050 scenario, which is consistent with IPCC SSP1-1.9³.

Our focus remains on our total emissions footprint, including our Scope 3 emissions, which is critical in order to achieve the goals of the Paris Agreement. We have linked our capital allocation strategy to the achievement of our climate targets.

We plan to deliver our ambition of net zero total emissions by 2050 through seven core actions:

Managing our footprint



Footprint

Managing our operational footprint
Reducing our Scope 1 and 2 emissions



Reduction

Reducing Scope 3 emissions
Our diverse portfolio uniquely allows us to address this portion of our footprint through investing in our metals portfolio, reducing our coal production and supporting deployment of low emission technologies



Capital

Allocating capital to prioritise transition metals
Investing in the metals that the world needs

Contributing to global decarbonisation



Partnership

Collaborating with our value chains
Working in partnership with our customers and supply chain to enable greater use of low-carbon metals and support progress towards technological solutions to address climate change



Abatement

Supporting uptake and integration of abatement
An essential contributor to achieving low – or net zero carbon objectives



Technology

Utilising technology to improve resource use efficiency
Contributing to the circular economy



Transparency

Transparent approach
Reporting on our progress and performance

¹ Base line restated to account for 100% ownership of Cerrejón from 2019, in line with Greenhouse Gas Protocol requirements. Due to the decision by Prodeco to cease operations and relinquish its licenses and pending the outcome of the relinquishment process, the base line has not been restated to exclude Prodeco. Our 2019 emission data is unchanged but will be restated for acquisitions and disposals following completion of the transactions during 2022.

² IPCC SR1.5

³ IPCC AR6 WGI



Our targets and ambition

We take a holistic approach to carbon reduction, recognising that a meaningful contribution to addressing climate change is only possible through total (Scope 1, 2 and 3) emissions reductions.

Our targets use methodologies that align with the goals of the Paris Agreement and were developed using the GHG Protocol. They cover all material sources of emissions and align with the Protocol's definition of organisational boundaries and materiality. We chose to adopt an absolute reduction metric as this delivers a specified reduction in the emissions we emit into the atmosphere.

Emissions reductions targets are considered 'science-based' if they are in line with the level of decarbonisation required to keep global temperature increase below two degrees compared

to pre-industrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). We use the IPCC scenarios to illustrate our compliance with the net zero ambition.

Our 2026 target lies within the range of IPCC's 1.5 degree scenarios and our 2035 target is aligned with the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario (NZE 2050), which is consistent with IPCC SSP1-1.9.

Our targets and ambition go beyond the International Council on Mining and Metals' (ICMM) collective commitments as set out in October 2021.

Glencore does not currently have a science-based target as defined by the Science Based Targets Initiative (SBTI)¹.

We have committed to report annually on our progress on our targets and ambition. We obtain external verification on our performance² against our emissions targets and report in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This report is prepared to meet the TCFD recommendations.

Our decarbonisation pathway



* Coordinated government policies, including incentives to drive accelerated uptake of lower carbon and decarbonisation technologies, and market based regulations governing industrial practices that drive a competitive, least cost emissions reduction approach, are critical to our ability to achieve our ambition of net zero total emissions by 2050

¹At the time of writing, the SBTi methodologies are not applicable for diversified companies as they rely on intensity measures that are too complex to be applied to diversified, cross commodity companies. The SBTi's methodology works on a single commodity or a single business, but is not applicable for multi-product businesses. We look forward to the development of methodology appropriate for our business.

² Our 2021 performance data will be available in our 2021 Annual Report.



Climate change governance ^{TCFD}

Glencore has a top-down commitment to deliver our climate targets and ambitions through a robust governance structure.

Executive oversight and board involvement

During 2021, we revised our internal climate change governance framework to drive implementation of the climate strategy and the supporting work programmes.

Our new Climate Change Taskforce (CCT) is accountable to our Board of Directors, to whom it provides regular progress and status updates. Its members include our Chief Executive Officer, Chief Financial Officer, Head of Industrial Assets and General Counsel, as well representatives from key corporate functions including investor relations, finance and sustainable development. Commodity departments, including heads of the departments and nominated representatives, participate in the working groups that support the CCT.

The CCT is responsible for overseeing our climate strategy and progress against our climate commitments. In 2021, the CCT met on four occasions and established four working groups to drive the delivery of our targets and net zero ambition.

The working groups focus on areas specific to our industrial activities, marketing activities, climate-related data and its disclosure and external stakeholder engagement and advocacy activities.

It is through these working groups that we assess initiatives to reduce our carbon footprint, identify and leverage carbon marketing opportunities, design and implement systems to support complete, accurate and attestable reporting and monitor external trends while coordinating and overseeing advocacy and communication efforts.

Strategic decisions, including those on capital allocation and portfolio management, are decided on by Group management and the Board.

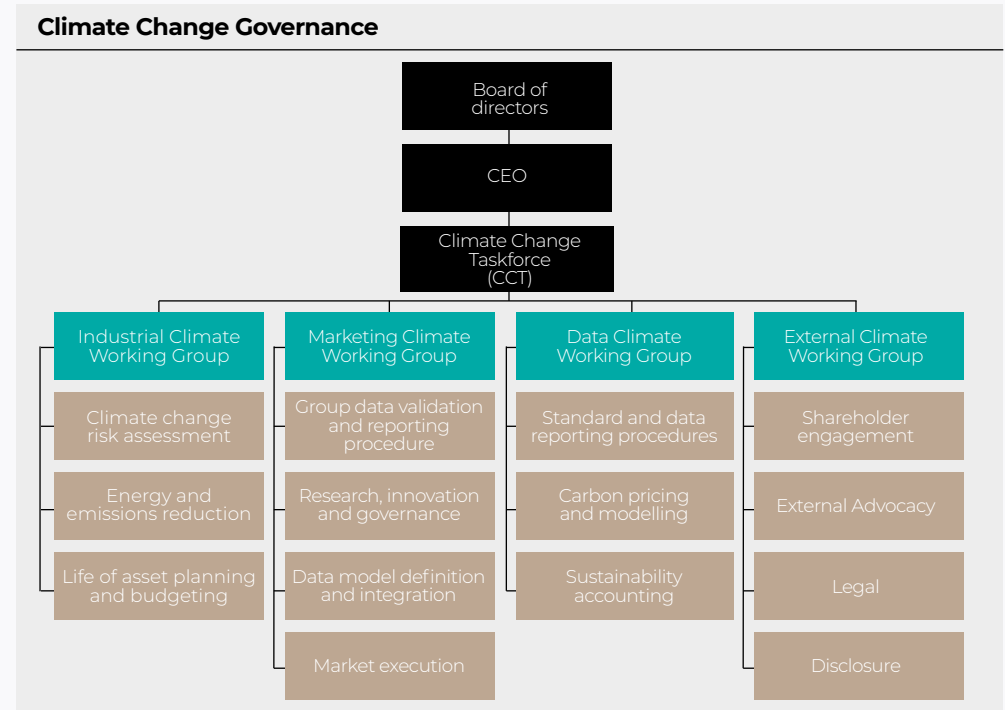
Our Chief Executive Officer is the named executive for driving the climate strategy within our Board. This is reflected in his remuneration package. Of the scorecard for his annual variable compensation, 30% is for KPIs relating to HSEC matters - 15% for safety performance and 15% for progress towards our short- and medium-term absolute emission reduction targets.

During 2021, our Board members received internal training on climate change. This included their duties as directors, legal risks, external expectations and details of our approach, targets and ambitions. It also emphasised the need for an effective integration of climate change into the Group's risk management processes and related Board oversight.

We recognise the importance that many of our shareholders attach to climate change and their desire to have the opportunity to advise us on our efforts. During 2021, in

response to this interest, we provided our shareholders with their first advisory vote on our three-yearly climate action transition plan. At our AGM, shareholders voted 94.4% in favour of our 2020 Climate Report: Pathway to Net Zero, which sets out our three-year plan to deliver our emission reduction targets and longer-term ambition of net-zero.

Going forward, at each AGM, we will provide our shareholders with an advisory vote on our three-yearly climate action transition plan and its intervening progress reports, of which this is the first report.



External stakeholder engagement

We engage with a broad range of stakeholders on climate-related topics.

Our investors and other stakeholders want to understand both our contribution to climate change mitigation and the exposure of our business to these various types of climate-related risks and opportunities.

We have actively engaged with the investor-led initiative, Climate Action 100+ and its forerunner, Aiming for A, for a number of years. This engagement has been a key input into the development of our climate strategy and targets.

During the year, our corporate engagement activities included inputting into the London Stock Exchange's Climate Governance Score and the Financial Reporting Council's Stewardship Regulators Group work on stewardship on climate change. We also responded to our banks' requests for information to support their responses to the Bank of England's climate stress test and the Australian Prudential Regulation Authority climate modelling.

We continued to engage with our suppliers and customers on climate-related matters. Our activities included establishing collaborative efforts on GHG emission accounting standards, life cycle assessments, carbon footprints for our products and decarbonisation efforts. We are actively looking for opportunities to partner with our stakeholders to drive the uptake of carbon neutral solutions and low emission technologies, as well as to develop robust and consistent emission tracking and data collection throughout our value chain. See page 27, Collaborating with our Value Chains.



Risk management^{TCFD}

Climate change-related impacts present both risks and opportunities to our operations, which we must identify and manage to ensure the long-term sustainability and resilience of our business.

Assessing climate change-related risks is part of our Group risk management and strategy development processes. Effective and strategic management of climate change-related risks and opportunities across all aspects of our business is considered vital to our continued ability to operate.

We take an integrated approach to risk management throughout our business through a structured process that establishes a common methodology for identifying, assessing, managing and monitoring risks. We use the same metrics to assess climate risk as we use for financial and operational risks.

We require our commodity departments to annually update their climate change risk assessments. They utilise a bottom-up approach to consider regulatory risks, including carbon taxes, project approval considerations, impact on license to operate and physical risks, such as flooding, droughts and extreme weather events. Identified material risks are incorporated into each asset's lifecycle planning. The risks are assessed and characterised in accordance with the Group's Risk Matrix and consider the period from now until 2035 (or the end of an asset's lifecycle).

In 2021, we assessed physical and regulatory risks to our operations with consideration to our climate scenarios.

The table opposite details the risks and opportunities identified across the business, as well as the mitigating actions.

During the year climate change risk assessments utilised the World Bank's Climate Change Knowledge Portal to assess each of our operating jurisdiction's risk of material impacts from weather-related events. The country profile consolidates the most relevant data and information on climate change, disaster risk reduction, and adaptation actions and policies for individual countries, drawing on information from the World Bank's portal as well as the latest Intergovernmental Panel on Climate Change (IPCC) reports and datasets.

This year's risk assessments found no fundamental changes to the risks identified or for the assets that we have assessed as being most at risk.

Risks and opportunities

Regulatory developments

Regulatory and policy developments to support emissions reductions have the potential to affect the ability to keep operating or developing assets through restricting operating and project permits, energy regulation or emissions caps. In addition, further regulation may increase operating costs as our assets put in place the necessary steps to comply with such regulation.

There are increasing moves to introduce carbon import taxes, led by the European Union's Carbon Border Adjustment Mechanism. These have the potential to affect our products' export markets and trade flows.

We also anticipate evolving regulation relating to energy intensity reduction for industrial emitters as countries put in place measures to meet their NDCs.

Mitigation

We play an active and constructive role in public policy development on carbon and energy issues, both directly and through our industry organisations. We seek to demonstrate an alignment between our commitment to responsible operating practices and a Paris-aligned climate strategy, as well as with regulators' objectives.

Through developing life-cycle analysis tailored to our commodities and production processes, we are able to identify optimisation potential, carbon reduction opportunities and energy efficiencies within our operations. Technology enables us to track emissions throughout our value chain and to work with our stakeholders to reduce emissions.



Read more
Incorporating carbon prices
Page 26



Risks and opportunities

Carbon pricing

Pricing carbon, either through direct taxes or leakage avoidance mechanisms (such as border taxes) may create additional costs through the value chain, as well as provide opportunities to promote lower-carbon products.

Variations in carbon pricing mechanisms between multiple jurisdictions can affect both the cost and the importation of our products.

Mitigation

We operate successfully in multiple jurisdictions that have direct and indirect carbon pricing or regulations.

We use carbon prices consistent with the IEA across each of our scenarios to assess the risk of rising carbon prices.

We have identified some parts of our business that would likely have financial stress in a high carbon price environment. However, following analysis of the impact of carbon pricing on operational costs of the industry segments in which we operate, our conclusion is that our business overall remains resilient. We consider local regulation and carbon price sensitivities as part of our ongoing business planning for existing industrial assets, new investments and as part of our marketing activities.

We utilise our Marginal Abatement Cost Curve (MACC) to act on cost-ranked emission reduction opportunities to mitigate high carbon prices and are actively committing to lower emission sources in our businesses.

We make use of carbon pricing instruments and, where practicable, offsets to enhance the value of our products.

We assess that increasing demand for our metals commodities is likely to drive higher prices, in turn offsetting increases to processing costs arising from the implementation of carbon pricing instruments.

We are working with relevant industry organisations on developing lifecycle analysis to calculate our specific commodities' carbon footprint.

Risks and opportunities

Energy costs

We are a significant energy consumer. Energy is a key input and cost to our business as well as being a material source of our carbon emissions.

Governments may impose taxes or levies on procured energy sources, limit supplies/ imports or introduce required purchasing or generation of renewable energy. The introduction of carbon tax and/or clean fuel standards may result in increased operating costs for our assets.

Mitigation

As the global patchwork of energy and climate change regulation evolves, we closely monitor international and national developments and their potential to impact our business.

We consider energy costs and our carbon footprint in our annual business planning process. Commodity departments are required to provide energy and GHG emissions forecasts for each asset over the forward planning period and provide details of mitigation projects that may reduce such emissions, including identifying and developing renewable energy generation opportunities.

Our assessment of potential mitigation and abatement projects forms the basis of our internal MACC.

Our business model is well placed to supply lower-carbon and renewable fuels to our industrial assets through the supplier network of our oil business.



Risks and opportunities

Physical impacts

Extreme weather events, such as floods, hurricanes and droughts, as well as changes in rainfall patterns, temperature, and storm frequency can affect our industrial assets' operating processes, related infrastructure, and the communities living close to our operations.

Access to capital

Activism may impact our access to capital or insurance, an increase in the cost of finance or divestment of our shares as banks and other financial institutions discontinue working with companies involved in fossil fuels.

Mitigation

We track changing weather conditions and amend operating processes as appropriate, and incorporate climate risk into our design and planning. We regularly review the integrity of our assets, including tailings storage facilities, against the potential impact of extreme weather events.

Our risk assessments utilise the World Bank's Climate Change Knowledge Portal to assess each of our operating jurisdiction's risk of material impacts from weather-related events in the period to 2035.

We have established ongoing processes to review our operational mitigating measures and to consider opportunities, where necessary, to strengthen these.

Through maintaining a strong relationship with our lenders, we continue to have a broad range of sources from which to access funds. We regularly review our banks and other institutions' climate change-related policies and evolving applicable restrictions.

Risks and opportunities

Permitting risk

Negative stakeholder perception around the role of the extractive sector in contributing to climate change may result in delays or restrictions to permit approvals.

Product demand

Variations in commodity use from emerging technologies, moving towards renewable energy generation and policy changes may affect demand for our products, both positively and negatively.

Changing demand may drive market substitution of existing products and services for those with lower emissions profiles.

Litigation

Litigation (including class actions), in which climate change and its impacts are a contributing or key consideration, including administrative law cases, tortious cases and claims brought by investors may affect our business. Delays or refusals of projects due to legal challenges could result.

Mitigation

We engage with a broad range of stakeholders on diverse topics including climate change and related areas of concern. Our engagement with our local communities and those directly affected by our operations is transparent and honest. Where we identify differing opinions, we look for opportunities to find constructive solutions.

Our strategy is to prioritise the investment in transition metals while managing the responsible decline of our coal portfolio. We track and respond to regulatory and technology developments including customer demand. There are near-term opportunities in positively repositioning many of our products that enable the decarbonisation transition. We anticipate increased demand for our products where these have lower emission profiles.

Our climate change programme strives to ensure that we identify, understand and monitor our emissions and climate change issues, in order to meet international best practice standards, ensure regulatory compliance and meet our commitments that support the goals of the Paris Agreement.



Delivering our ambition

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Our strategic approach to delivering our ambition

Our purpose is to responsibly source the commodities that advance everyday life. Our portfolio's diversity underpins our strategic ambition to play a leading role in enabling the decarbonisation of global energy demand through supplying metals such as copper, cobalt, zinc and nickel that are essential to the transition to a low-carbon economy.

We have identified seven core pathways to meet our short- and medium-term targets of a 15% and 50% reduction of our total emissions by 2026 and 2035 respectively, on 2019 emissions, as well as our longer-term ambition of achieving net zero by 2050.

Managing our footprint



Managing our operational footprint:

Reducing our Scope 1 and 2 emissions

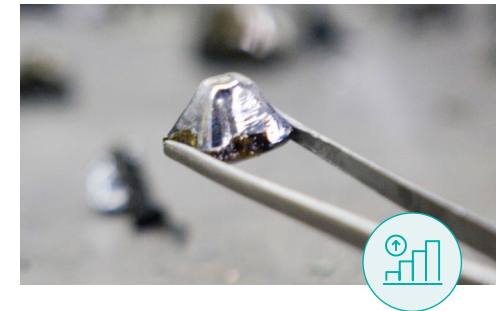
Our group-wide Marginal Abatement Cost Curve (MACC) model captures existing and possible GHG reduction opportunities across our portfolio.



Reducing Scope 3 emissions:

Our diverse portfolio uniquely allows us to address this portion of our footprint through investing in our metals portfolio, reducing our coal production and supporting deployment of low emission technologies

Our responsibly produced energy products will deliver near- and medium-term energy needs, essential to the advancement of developing economies and the delivery of the UN SDGs.



Allocating capital to prioritise transition metals:

Investing in the commodities the world needs

We recognise the importance of disclosing how we ensure our material capital expenditure and investments align with the goals of the Paris Agreement.

SDG 15:
Life on land

SDG 12:
Responsible consumption and production

SDG 11:
Sustainable cities and communities



Contributing to global decarbonisation



Collaborating with our supply chains

Working in partnership with our customers and supply chain to enable greater use of low-carbon metals and support progress towards technological solutions to address climate change

We are identifying opportunities to work with our customers and suppliers, policy bodies and standards-setting organisations to support and promote greater use of low-carbon metals, and to form strategic partnerships that enable critical transitions in transportation, infrastructure and energy systems.

SDG 17:
Partnerships for the goals

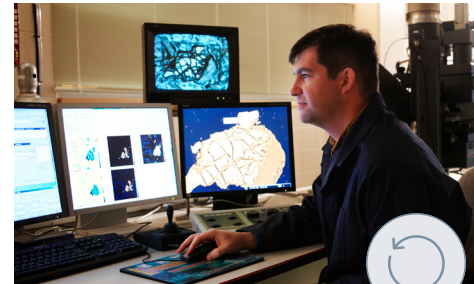


Supporting uptake and integration of abatement

An essential contributor to achieving low – or net zero carbon objectives

In achieving our emissions reduction target and ambition, as well as adapting to emerging pricing mechanisms, we recognise the importance of abatement mechanisms such as CCUS to achieving the goals of the Paris Agreement. Development and deployment of these mechanisms requires collective action; we are supporting these efforts directly and through policy advocacy.

SDG 7:
Affordable and clean energy



Utilising technology to improve resource use efficiency

Contributing to the circular economy

As both policy and consumer demands drive the move towards emissions reductions and a circular economy, technological developments are required to meet these ambitions. There is increasing recognition of the need to increase the use of secondary metals, which our recycling business is well placed to meet.

SDG 9:
Industry, innovation and infrastructure



Transparent approach

Reporting on our progress and performance

Through regular clear and accurate disclosure of our actions to reduce emissions, we can support the understanding of our performance and progress, as well as set out how policy and technology developments create opportunities and risks for our portfolio.

SDG 13:
Climate action



Managing our operational footprint



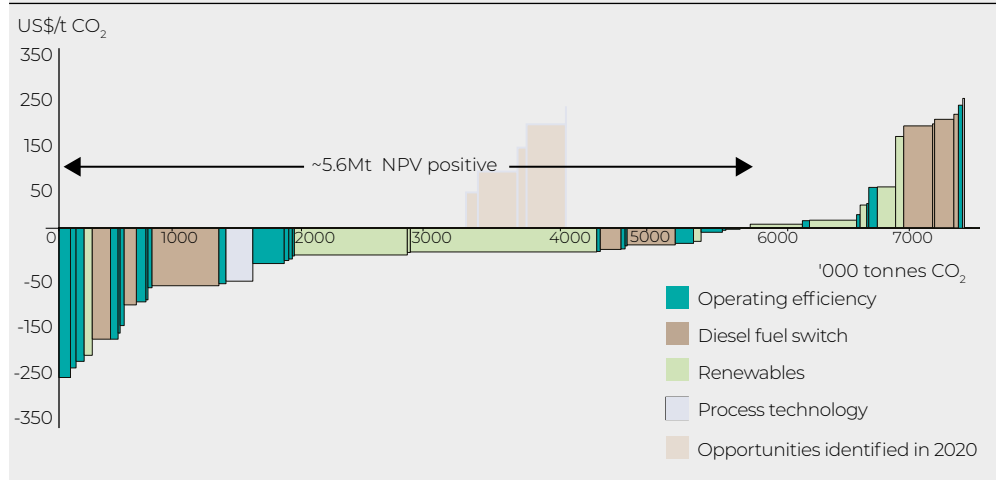
Our group-wide Marginal Adjustment Cost Curve (MACC) continues to evolve and identifies GHG reduction opportunities across our portfolio.

Identifying emission reduction opportunities

Our MACC enables an assessment of viable and economic abatement opportunities. When practically and economically viable, implementation of abatement opportunities will be rigorously pursued. For example, anticipating when increases to carbon prices and/or technological advancement at scale, make the building of renewable power installations more cost effective than purchasing grid-generated power.

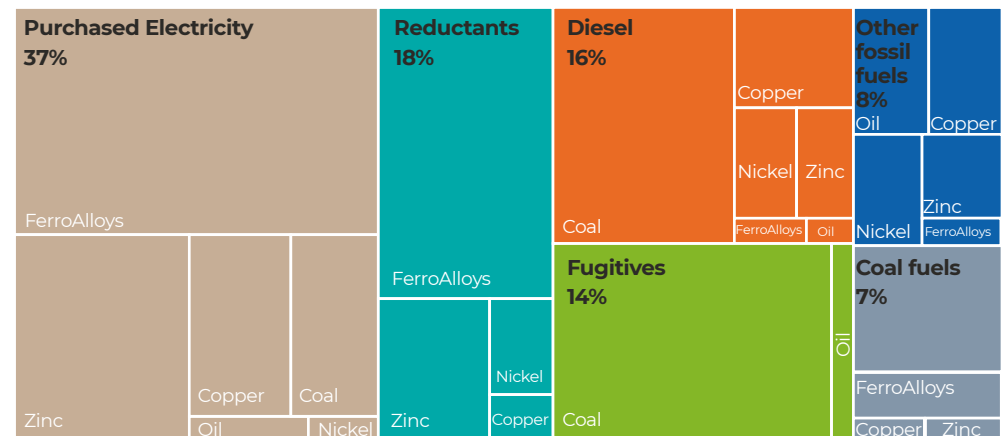
We undertake a uniform approach to MACCs at a commodity department level. This enables a group-wide aggregation of key decarbonisation opportunities and actions, which in turn supports a holistic approach to reviewing the pipeline of initiatives from concept to execution stage.

2021 Group Marginal Abatement Cost Curve

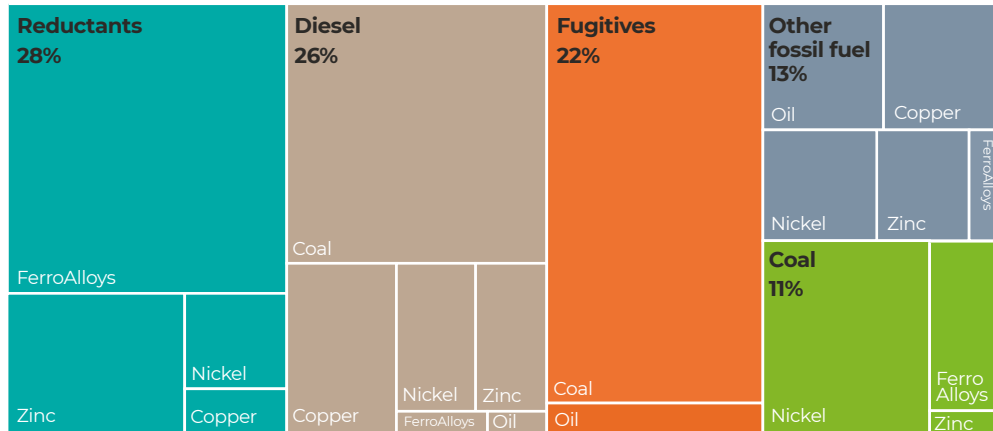


We review and update our MACC on an annual basis.

Scope 1+2 2019 Emissions 2019 Baseline



Scope 1 emissions 2019 Baseline



During 2021, we continued to collect asset-level data to improve our understanding of our abatement opportunities. We incorporated this work into our annual planning cycles, supporting our assessment of the carbon price scenarios required to trigger the investment in these opportunities.

Through understanding the impact of the different carbon prices from the key climate scenarios on our assets' cost curves and emission profiles, we can identify where and when to make investment in abatement opportunities. This ensures that we target value-accretive investments, thereby incorporating climate change considerations into our business strategy rather than considering emissions reduction as a standalone work stream.

Many of our industrial assets include downstream processing into final metal products, including copper, nickel, ferroalloys and zinc. As a result, carbon-based reductants are the largest emissions contributor to our Scope 1 operational footprint. These reductants are required for the smelting of mineral concentrates to produce final metals and are typical of a vertically-integrated supplier of the commodities required to drive the energy transition.

It is understood that emissions from the use of reductants are hard to abate and require a fundamental change to the existing process technology. For this reason, our decarbonisation pathway considers a longer timeframe needed to address emissions from the use of reductants.

Within our commodity departments there are a number of process technology and innovation programmes researching the ability to reduce emissions from the use of carbon-based reductants. These include research activities into the use of hydrogen as well as the use of bio-sourced carbon.

Diesel is one of the largest contributors to our Scope 1 emissions. We have identified three pathways to address this:

- In the near-term, we will consider deploying existing fleet electrification technologies at our large open-pit operations that are connected to national grids already utilising renewable energy sources.
- In the medium to longer term, our planning of mining fleet replacement will align with the expected arrival of new technology equipment not currently commercially available, such as battery electric or hydrogen fuel cell haul trucks. We anticipate these technologies becoming available before the end of this decade.

- In collaboration with our peers and equipment manufacturers through the ICMM, we continued to work to promote operational and technological innovation required to reduce emissions. The programme is working to accelerate the development of zero-emission mining equipment and ultimately aims to enable mining operations to adopt zero emission surface mining fleet by 2040.

Along with our direct actions to reduce Scope 1 emissions within our ongoing operational boundaries, we recognise that our coal business is the largest consumer of diesel, as well as our largest source of fugitive emissions. On this basis, the responsible depletion of our coal assets will also be an important contributor towards reducing our Scope 1 emissions.



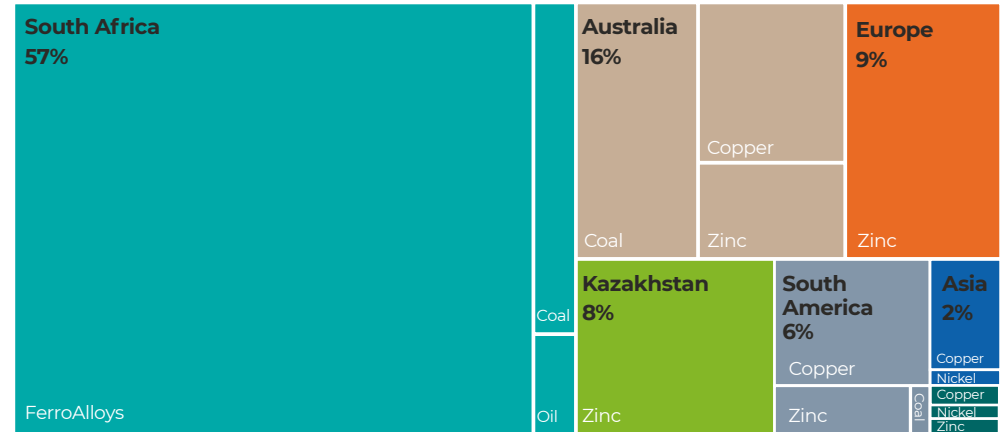
Building a mine for the future

While the emission reduction opportunities for underground mines are not as large as for open pit mines, zero-emission vehicles for underground mining are now becoming commercially available due to the added benefits of reducing ventilation requirements in deep underground mines. In Canada, we are in the process of establishing a fully electric vehicle fleet for our new Onaping Depth mine.

We have designed this deep nickel mine, currently under construction, to utilise battery-electric mobile mining equipment that maximises real-time remote operation, monitoring and management utilising advanced Wi-Fi systems. The benefits include the elimination of diesel emissions, reduced ventilation and lower noise pollution. We expect Onaping Depth to reduce its emissions by 7,500 tonnes of CO₂e per year, a reduction of around 45% compared to a similar mine with diesel-powered vehicles. This is achieved mainly from less ventilation and, as a consequence, less energy for heating during the winter.



Scope 2 emissions 2019 Baseline



The indirect emissions associated with the electricity consumed by our assets, our Scope 2 emissions, is also a major action area within our decarbonisation plans.

As a vertically-integrated producer of metals, the largest contributor towards our Scope 2 operational footprint is the consumption of electricity by our smelting assets.

Where our assets purchase electricity from grids where renewable energy sources are available, and it is economic to do so, we prioritise entering into Power Purchase Agreements that move our energy consumption to renewable sources, such as hydro, wind or solar.

For our assets that are not connected to grids and reliant on local electricity generation, we study options for installing on-site renewable energy systems, such as wind and solar.

In some of our operating jurisdictions, we are also delivering and investigating opportunities to support national grids' utilisation of renewable energy sources, as well as biofuels and energy storage.

In 2012, we agreed with Société Nationale d'Électricité (SNEL), the DRC's national electricity utility, for our operations to contribute US\$375 million to a major electricity infrastructure refurbishment programme, including the rehabilitation of two turbine generators at the Inga Hydroelectric Project along with transmission and distribution upgrades. This facilitated a progressive increase in power availability



to 450 megawatts and allocated 50 megawatts of power for the use of the Kolwezi community. The project was completed in 2021.

Abating our Scope 1 and 2 emissions

Our industrial decarbonisation pathway is underpinned by our detailed understanding of our Scope 1 and 2 operational footprint, as well as our established and repeatable processes for identifying and delivering emissions abatement actions.

Our Scope 1 and 2 emissions abatement pathway shows the impact of currently identified MACC initiatives, in

combination with the forecast depletion of our coal assets, as we step through our short- and medium-term targets for our total emissions reductions and our 2050 net zero ambition.

Our abatement pathway for Scope 1 and 2 emissions demonstrates a clear alignment of our current process capability and our commitments. The pathway outlines the impact of the robust level of existing MACC initiatives across a range of Scope 1 and 2 emissions categories. We are working to identify the additional MACC initiatives necessary to close the remaining gap on meeting the medium-term target and net zero ambition.

Securing a renewable energy supply

During 2021, Glencore's Asturiana de Zinc and EDP have signed agreements for the sale of electricity (PPA), from wind farms of EDP Renewables, for the next 19 years (between 2021 and 2040), the longest-term contract of its kind signed by EDP Spain.

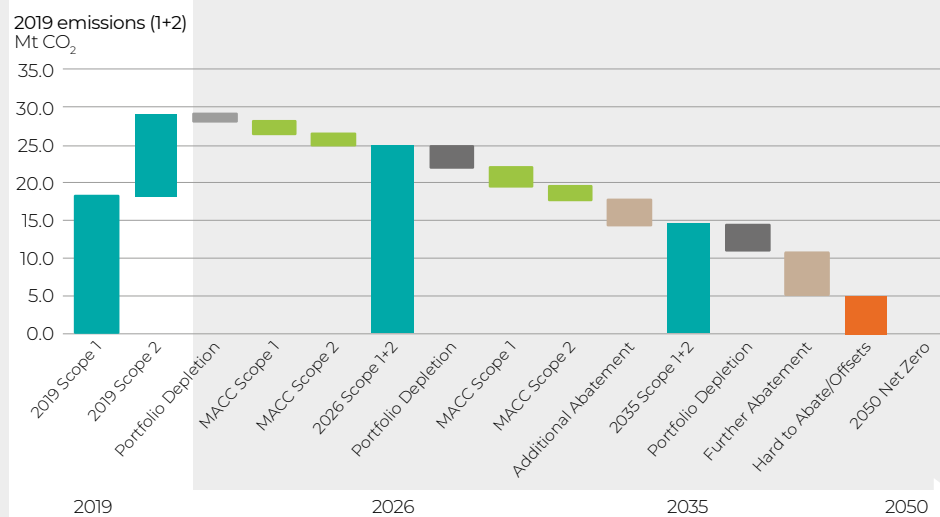
The energy company will supply the San Juan de Nieva plant during these 19 years with 237 GWh per year, from wind farms that EDP Renewables is developing in Spain. This amount of energy is equivalent to the average annual electricity consumption of 65,000 homes. The consumption of this renewable energy will avoid the emission of 63,000 tons of CO₂ each year, an impact on air quality similar to that of 4.5 million new trees. The new electricity supply agreement with EDP will also help to ensure that we meet our customers' requirements for low-carbon metals.

Reducing operational Scope 2 emissions

In northern Canada, our Raglan Mine's location means it cannot connect to the provincial power grid and needs to use diesel to produce electricity. In 2014, together with TUGLIQ Energy, Raglan Mine built its first wind turbine, the first use of renewable energy in Québec's Arctic territory. It built its second in 2018. The two wind turbines produce about 10% of the mine's total energy, saving approximately 4.4 million litres of diesel annually and reducing GHG emissions by about 14,000 tonnes each year. Raglan Mine continues its efforts to reduce its carbon footprint in collaboration with TUGLIQ Energy, its renewable energy partner, including the development of a photovoltaic solar park, which began in 2020 and was completed in July 2021. This project's objective is to assess the performance of solar energy production in Canada's Far North. The new facility consists of 108 panels, which are expected to generate 40 kilowatts-peak of energy.

In 2021, Raglan Mine took delivery of the MV Arvik, a new icebreaking vessel that ships its nickel in concentrate to the Port of Quebec. The new ship generates 27% less carbon than the previous vessel, equivalent to approximately 5,000 tonnes of CO₂ per year.

Scope 1 and 2 emissions reduction pathway



Investigating renewable energy opportunities

Our ferroalloys business is responsible for the greatest proportion of our Scope 2 emissions and represents one of the largest opportunities to abate these emissions through renewable energy power generation.

The ferroalloys renewable energy project aims to establish a significant offsite generating capacity for renewable energy that will provide power for the chrome assets and vanadium mine, as well as the installation of a number of small onsite renewable energy power generating units at the chrome assets and manganese mine.

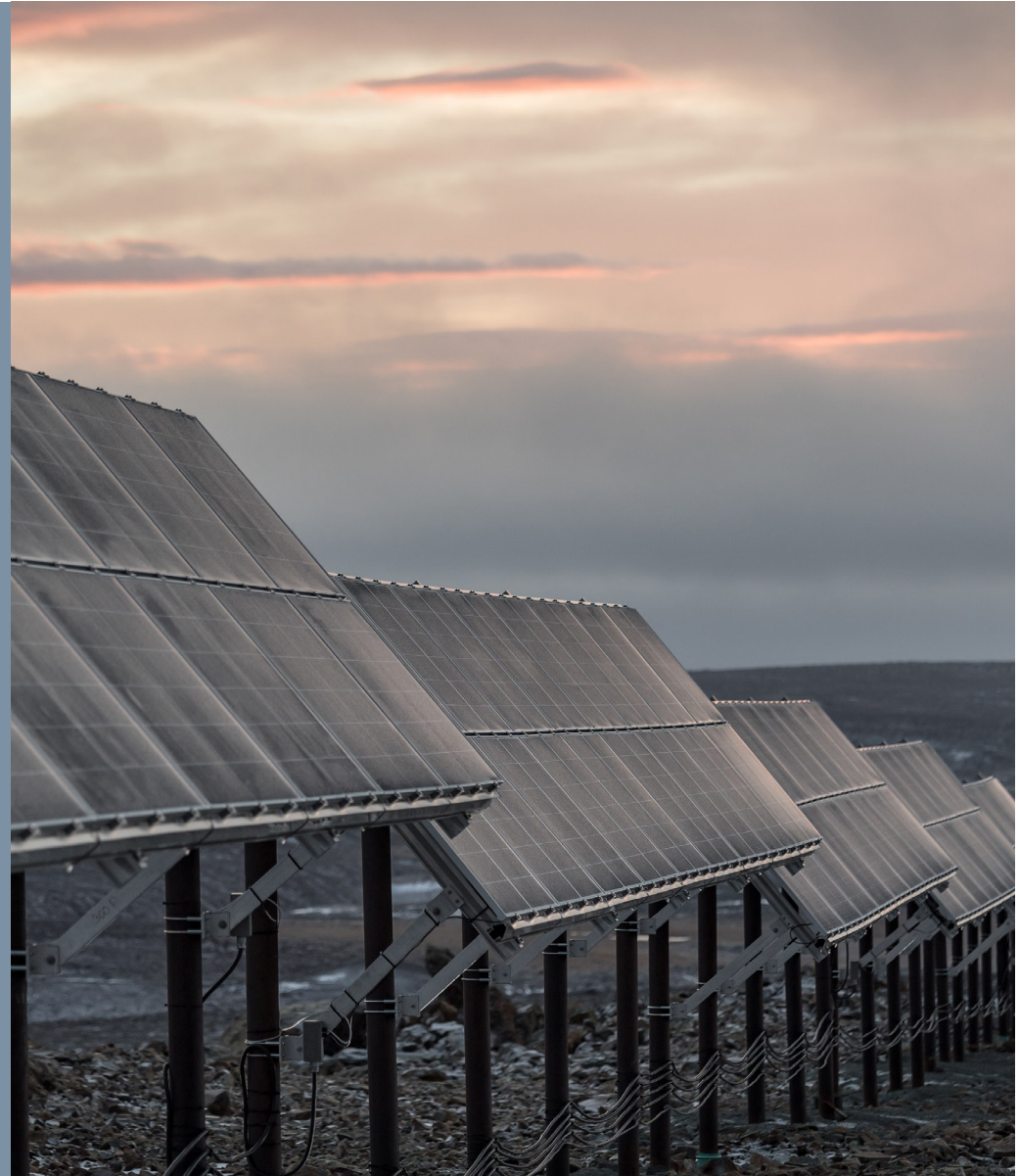
This approach targets a flexible introduction of renewable energy in phases of approximately 200MW each at Glencore-Merafe ferrochrome smelters. The first 400MW of this renewable energy may reduce Scope 2 emissions by around 1.2 million tonnes per annum (or approximately 14% of our ferroalloys business' total scope 2 emissions) by the end of 2027.

Further Scope 2 emission abatement opportunities within ferroalloys are focussed on converting furnace off-gas into electricity. In 2021, our ferroalloys

business signed a multi-year energy conversion service agreement with Swedish Stirling AB. The agreement is for the application Swedish Stirling's container-based solution (PWR Blocks) used to harness energy from residual furnace gases. The contract will see the installation of 25 PWR Blocks (producing a total of 10MW) at the Lion smelter, as well as an option for the Glencore Merafe Venture to extend the term of the agreement.

During the contract period, the installation is estimated to offset the carbon dioxide emissions from the Lion smelter by over 500,000 tonnes. The first PWR Block is expected to be delivered to Lion in 2022. The facility will be owned and operated through a special purpose vehicle, established and controlled by Swedish Stirling.

While our ferroalloy assets are the majority contributor to Scope 2 emissions within Glencore, being located in South Africa places these assets geographically at an advantage where they are able to participate in the transformation of the South African power generation market. It is our expectation that the Scope 2 abatement opportunities within the ferroalloys business will be able to be delivered as NPV positive projects.



Reducing Scope 3 emissions



Our diverse portfolio uniquely allows us to address this portion of our footprint through investing in our metals portfolio, reducing our coal production and supporting deployment of low emission technologies.

Our Scope 3 emissions are the indirect GHG emissions across our value chain. They include emissions from upstream supply chains, downstream customer use of our products, third-party logistics and transportation, and emissions associated with joint ventures that we do not operate. While these emissions are the result of activities outside of our direct control, we can exert an indirect influence through taking a collaborative approach with our value chain stakeholders and by making changes to our product portfolio.

For the extractive sector, Scope 3 emissions tend to be the largest proportion of total emissions. For Glencore, these emissions represent over 90% of our total carbon footprint and including a reduction in Scope 3 emissions is essential for making a meaningful contribution to reducing global emissions.

The GHG Protocol informs our approach to Scope 3 emissions reporting. In 2016, we completed a boundary assessment to determine which of the Protocol's 15 categories to include in our Scope 3 emission inventory. We are reviewing our approach and may revise our assessment of the materiality of certain categories in the future.

Category	kt CO ₂ e 2019	Methodology	GHG Accounting Approach
Category 1. Purchased goods & services	787	Group-level Average-data method	Estimated upstream Scope 3 emissions from third-party copper, lead, nickel and zinc feeds into our combined mine and smelting/ processing facilities.
Category 2. Capital goods		N/A	Considered immaterial.*
Category 3. Fuel and energy-related activities (not included in Scope 1 or 2)	851	Group-level Average-data method	A major source of fuel- and energy-related Scope 3 emissions results from transmission and distribution losses of purchased electricity.
Category 4. Upstream transportation and distribution	1,280	Asset-level Fuel-based method	Marine fuel consumed by time-chartered shipping, both upstream and downstream transportation, applying GHG protocol emission factors for the specific fuel types.
Category 5. Waste generated in operations		N/A	Considered immaterial*.
Category 6. Business travel		N/A	Considered immaterial*.
Category 7. Employee commuting		N/A	Excluded*.
Category 8. Upstream leased Assets		N/A	Excluded*.
Category 9. Downstream transportation and distribution	1,280	Asset-level Fuel-based method	See category 4.
Category 10. Processing of sold products	11,256	Group-level Average-data method	Estimated emissions from further downstream processing by our customers of our copper, nickel, zinc, ferrochrome and lead concentrates and metal.



Category	kt CO ₂ e 2019	Methodology	GHG Accounting Approach
Category 11. Use of sold products	325,705	Group-level Direct-use phase for fuels and feed stocks	Emissions relate to the use of saleable fossil fuels (coal and oil), produced by industrial operations under our operational control.
Category 12. End-of-life treatment of sold products		N/A	Considered immaterial for metals due to recyclability. Considered in category 11 for hydrocarbons and coal.
Category 13. Downstream leased Assets		N/A	Excluded*.
Category 14. Franchises		N/A	Excluded*.
Category 15. Investments	2,238	Group-level Investment-specific method where possible (otherwise average data method)	Our share of Scope 1 and 2 emissions from our investments in Antamina, Century, Cerrejón, Collahuasi and Viterra.
Total Scope 3 emissions	343,000	Group-level	All categories of our Scope 3 emissions that are relevant and material to our operations.

* The listed inclusions/exclusions reflect the Group-level boundary assessment completed in 2016. GHG Protocol criteria for the identification of relevant Scope 3 activities, products, services are: size, influence, risk, stakeholders, outsourcing, and/or sector-guidance. The GHG Protocol allows for exclusions on the basis that accounting methods have not yet matured, or significant data gaps exist (i.e. lack of relevant emission factors).

Identifying and reducing our Scope 3 emissions

During 2021, we increased our engagement with our key equipment manufacturing suppliers and customers to improve our understanding of the emissions within our value chain. We are actively looking for opportunities to partner with our stakeholders to drive the uptake of carbon neutral solutions and low-emission technologies, as well as to develop robust and consistent emission tracking and data collection throughout our value chain.

In the short term, we are actively monitoring our stakeholders' decarbonisation efforts and exploring partnership opportunities to develop and commercialise carbon-neutral goods, services, and processes. Over the medium term, we plan to systemise the integration of our climate targets into our supplier selection criteria and to develop internal systems that more accurately track value chain emissions that will feed into our annual Scope 3 inventory reporting.

We encourage our suppliers to develop decarbonisation roadmaps for the reduction of the carbon footprint of their products and associated handling and transportation, in line with the goals of the Paris Agreement.

As the reporting boundaries and methodology of our Scope 3 emission accounting evolve, we will restate the emissions baseline for our total emissions targets as needed.



Managing our coal portfolio

Our approach to our coal assets is to continue to operate our mines until they reach the end of their lives. Through responsible stewardship of these assets and a managed decline of our coal portfolio, we will deliver our commitment to operate our business in line with the goals of the Paris Agreement, while delivering near- and medium-term energy needs, essential to the advancement of developing economies and the delivery of the United Nations' Sustainability Development Goals.

Due to Covid-19, global economic activity fell significantly during 2020. As a result, global energy demand also declined, reflected by a reduction in our produced coal volumes. As the world recovers from the impacts of the pandemic and global demand grows, we forecast a recovery in our coal production as our operations gradually move back towards their normalised steady state. Despite such higher near-term production, we remain on track to deliver a 15% reduction of our

total emissions by 2026 on our baseline of 2019. We plan to achieve this through progressive rehabilitation and closure of some of our assets, including, in the near term, Liddell, Integra and Newlands.

During 2021, we bought out a number of our minority joint venture (JV) partners in our Australian operations. Reflecting our majority ownership, management and operatorship of these assets, we incorporated their production volumes and emissions into our short- and medium-term targets.

In June, we announced the acquisition of the interests of our joint venture partners, BHP and Anglo American, in the Cerrejón mine in Colombia.

Following notices from BHP and Anglo American that they intended to sell their stake, we carefully considered how best to respond in a manner that reflected our commitment to achieve the goals of the Paris Agreement and acknowledging our obligation to act as a responsible steward of assets.

Based on our long-term relationship with Cerrejón and knowledge of the asset, we strongly believe that acquiring full ownership was the right decision and the progressive expiry of the current mining concessions by 2034 is in line with our commitment to a responsible managed decline of our coal portfolio. Production volumes are expected to decline materially from 2030.

The alternative would have been one or more new JV partners acquiring these shares and compromising the sustainable operating philosophy of Cerrejón, and extending production beyond the current mining concessions. Equally, a disposal of Glencore's current stake in the mine would not be consistent with our stated commitment to a responsible managed decline of our coal portfolio, nor would it result in a genuine reduction of absolute GHG emissions.

We anticipate completing the acquisition during the first half of 2022.

In early 2021, we announced Prodeco, our Colombian coal subsidiary's, intention to relinquish its mining contracts to the national government. Prodeco conducted a number of operational reviews that showed the uneconomic nature of the asset.

In common with other mining licences in Colombia, our agreement with the Colombian government is that when an asset is no longer operated, the operating licence should be returned to the state.

The decision to relinquish the mining contracts was not taken lightly. Over the last 30 years, Prodeco has invested over US\$3 billion in its assets and paid almost US\$3 billion in royalties and taxes. We are proud that our investment in a multitude of social engagement projects and initiatives, has delivered tangible improvements in the quality of life for the surrounding communities, and supported the Colombian peace process.

Prodeco's mines remain on care and maintenance until the formal process of relinquishing the contracts is complete.



Supporting a just transition

We recognise that the transition to a low-carbon economy will affect mining regions in different ways. For some operational jurisdictions, there may be a move towards automated equipment and for others the closure of uneconomical assets. We are conscious of the potential negative socio-economic impacts on the communities living around our operations as a result of the global transition.

We are supportive of the concept of a 'just transition', which seeks to ensure the benefits of the low-carbon transition are shared widely and fairly and support those who lose economically.

Mining operations have a 'life of mine' and over the years, we have closed a number of our assets. In the period to 2026, a number of assets across our Australian and South African businesses will reach the end of their economic lives.

In South Africa, the National Business Initiative (NBI), in partnership with Business Unity South Africa (BUSA) and the Boston Consulting Group launched the Climate Pathways project for a Just Transition in South Africa. The project brings together the private sector, government, labour and civil society to work collectively on developing a view of the decarbonisation pathways for the

South African economy. We participate in the initiative's working group, as well as in one of NBI's advisory groups that support this project.

For a mine's closure to be 'successful' a multi-stakeholder approach is essential. We consult with national and regional governments, the affected communities, trade unions and civil society groups to develop appropriate programmes to manage the socio-economic consequences arising from mine closure.

Our assets are required to use the ICMM's Integrated Mine Closure: Good practice guide, which includes a focus on social provision in closure planning, in their management systems.

We have incorporated this guide into our own Closure Standard, which recognises the need to maximise opportunities to create a positive legacy for regions where we operate. In addition, we require all of our industrial assets to have a credible closure plan that could be initiated at any time, whether on planned life of asset closure, an earlier 'unplanned' closure, or a temporary closure. These plans include the requirement of establishing and regularly updating social transition planning processes.



Allocating capital to prioritise transition metals



Investing in the metals that the world needs

We recognise the importance of disclosing how we ensure our material capital expenditure and investments align with delivering our short- and medium-term targets and longer-term ambition, as well as the goals of the Paris Agreement. This includes transparently reporting in our Annual Report on our capital expenditure to develop, maintain and expand the production of metals associated with the transition to a low-carbon economy. We also disclose the costs associated with the responsible depletion of our energy assets.

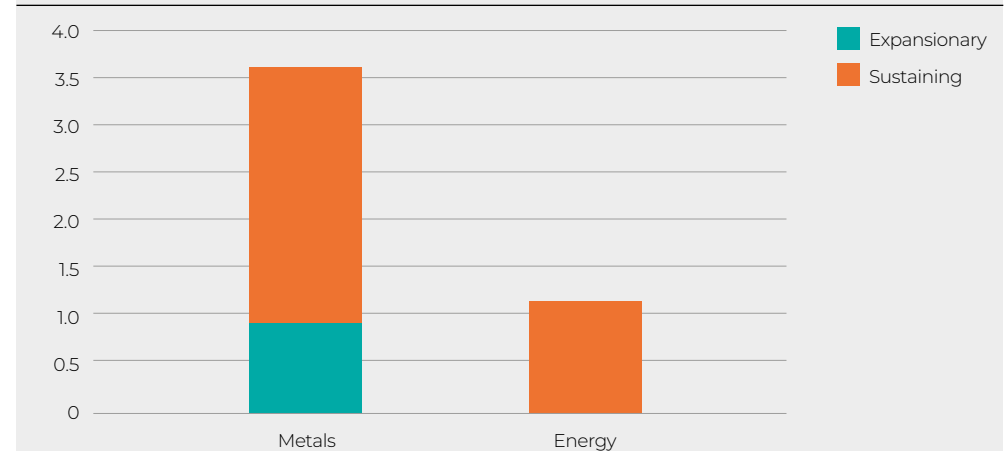
Our current and forecast capital expenditure aligns with our emissions-reduction targets, reflecting our commitment to prioritise the development of our portfolio's transition metals. Running down our industrial energy portfolio will contribute to the reduction of our total emissions. Going forward, we have allocated capital to deplete our energy assets in a responsible manner that is consistent with our Values and our climate strategy. We expect that capital spend on our coal business will decline over time, commensurately with the decline of the portfolio.

In support of the delivery of our strategy and targets, we have committed expansionary capital for:

- Construction of the next generation of nickel mines in Canada (Onaping Depth and Raglan); we expect to commission these in 2024-25;
- Our attributable share of Collahuasi's desalination plant and associated pipeline and pumping infrastructure;
- Feasibility stage work on a range of longer-dated copper, nickel and zinc resources.

In addition, we are assessing further value-accretive opportunities within our project pipeline. We base our investment decisions on a number of factors, including carbon considerations and impact on delivering our emissions-reductions targets. We expect these to be funded with current 'stay in business', life-of-asset capital expenditure. We assess our investment decisions against Paris-aligned carbon prices which in Advanced economies are at \$180/t CO₂e in 2035.

2022-24 Average annual expected capital expenditure¹ (US\$ billion)



¹ Our material further growth expansion options under active consideration are all in the transition metals arena



Investing in transition metals

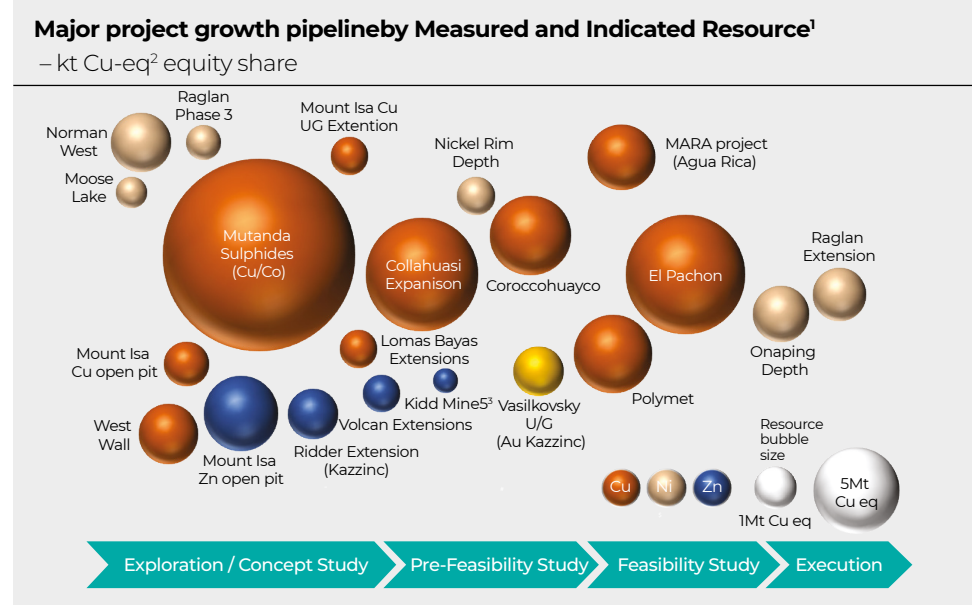
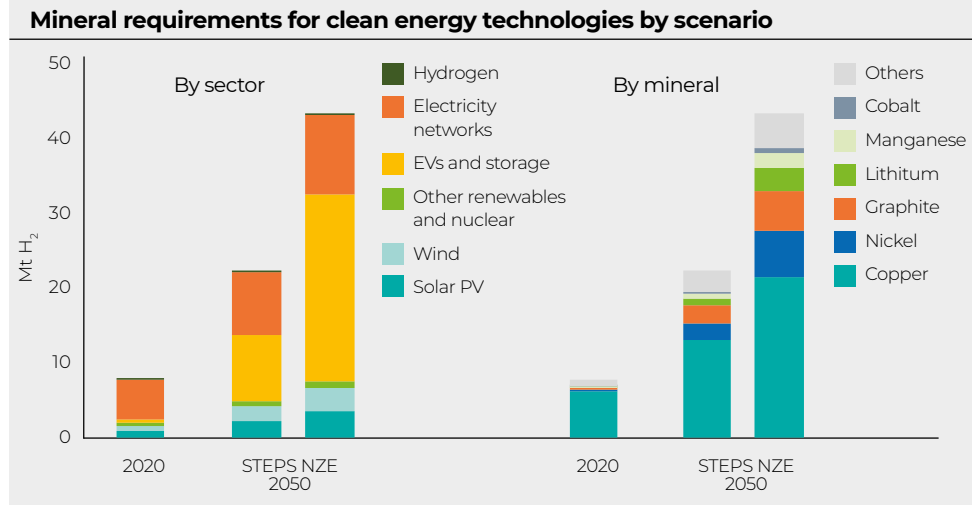
Consistent with our strategy, we will continue to prioritise investment in metals that support the transition.

In our Annual Report, we disclose how we ensure our material capital expenditure and investments align with the goals of the Paris Agreement, including our costs relating to the exploration, acquisition or development of fossil fuel production, resources and reserves, as well as for the metals essential to the transition to a low-carbon economy.

Our assessment of the acceleration of metals demand under all scenarios has been corroborated by work completed by the IEA and others. The energy transition relies heavily on the electrification of systems together with rapid adoption of wind, solar and energy storage solutions. These solutions are metals intensive and will require significant investment in new mines and expansion of existing assets to access the resources.

The IEA shows that by 2050 the metals requirements for clean energy technologies will require between 2.1 and 3.4 times more copper than in 2020, between 10.8 and 30.1 times more nickel and between 9.9 and 32.9 times more cobalt¹.

We continue to progress work to deliver growth opportunities for the transition metals within our portfolio. Our major project pipeline highlights our copper, cobalt, nickel and zinc projects that are moving through the development stages, depicted by copper equivalent resource size.



¹ Derived from IEA WEO 2021 figure 6.14

¹ Basis 2020 Reserves and Resources Report.

² Copper-equivalent calculation based on long-term price assumptions.

³ Bubble size based on measures, indicated and inferred resources.



Responding to carbon pricing

We operate successfully in multiple jurisdictions that have direct and indirect carbon pricing or regulation. We take a systematic approach to local regulation and carbon price sensitivities as part of our ongoing business planning for existing industrial assets, new investments and as part of our marketing activities.

We use carbon price scenarios to assess the potential impacts on operating costs arising from existing and future potential carbon pricing regulation. We assess these impacts through applying emission costs to the carbon emissions and cost curves for the various industries in which we operate. This enables us to understand how underlying cost structures will change over time and allows us to identify where costs can be passed on. In the Radical Transformation scenario we have assumed the carbon price assumptions as shown in the Carbon Price table opposite:

Applying these carbon prices to each of our major commodities shows marginal supply costs (90th percentile) would increase from 10% to over 60%.

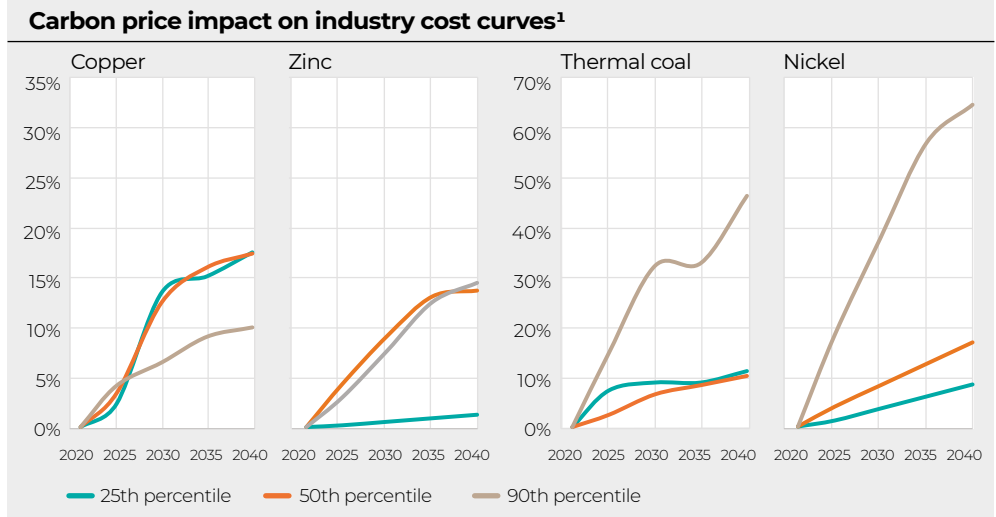
Most of our assets lie in the lower to middle part of their respective industry costs curves and would benefit from a higher marginal supply cost. Against a backdrop of rapidly increasing demand, we anticipate that cost and demand forces will drive prices higher and be passed through to consumers, resulting in little impact on our business.

In fact, first and second quartile emission intensity producers are likely to see margin expansion, the area of the emission intensity curves in which we see our copper/cobalt and zinc portfolio currently residing, together with our Canadian nickel assets.

As carbon border adjustment mechanisms are imposed, we expect global supply chains to adjust to minimise the exposure to carbon costs. We are well positioned through our marketing business to respond to revised commodity market flows. We anticipate that our thermal coal business, which primarily delivers high energy coal, will be less impacted than producers of lower energy, high moisture coals.

Carbon price – US\$/t	2021	2025	2030	2035	2040
Advanced economies	As legislated	80	130	180	200
Emerging markets		40	90	140	160
Developing economies		5	15	25	35

Source: Carbon prices reflect Our Radical Transformation Scenario (equivalent to IEA NZE2050)



¹ Source: WoodMackenzie, Glencore analysis



Collaborating with our value chains



We are working in partnership with our customers and supply chains to enable greater use of low-carbon metals and to support progress towards technological solutions.

We are working with respected corporates, our suppliers and customers, policy bodies and standards-setting organisations to identify opportunities to both promote and supply greater use of low-carbon metals and renewable fuels that enable critical transitions in transportation, infrastructure and energy systems.

Supporting our customers through the delivery of low-carbon products

In addition to lowering our own carbon footprint, Glencore seeks to contribute to the decarbonisation of global value chains through offering low-carbon products to our customers. As a vertically integrated extractive and marketing business, we are able to leverage our carbon reduction efforts as well as market expertise to meet the increasing needs for attestable low-carbon products.

An accurate assessment of our products' environmental impact requires a methodology with clear rules on emission attribution. It needs to be able to trace emissions through complex production processes and account for various product and service inputs and outputs throughout the product's value chain and life cycle. Life Cycle Assessment (LCA) and Product Carbon Footprint (PCF) studies facilitate this analysis by tracking and assessing a product's environmental impacts that arise from mining, processing, use, maintenance and disposal or recycling.

We contribute to LCA studies conducted by commodity- and product-specific industry organisations. During 2021, we participated in LCA assessments conducted by the International Zinc Association, International Copper Association, International Chromium

Development Association, Nickel Institute, Global Battery Alliance and RECHARGE.

However, as demand for attestable low-carbon products evolves beyond the industry organisations' LCA granularity, we are assessing options to develop modelling tools that support an accurate assessment of GHG emission footprints specific to our products, production processes and value chains.

Underpinning our decarbonisations efforts

Our newly established carbon and power trading desks have expertise in power, low carbon, environmental products trading, origination, structuring and execution including carbon regulatory and carbon standards and methodology. An objective for these desks is also to focus on electrification, so as to develop a value proposition for addressing our Scope 2 power use. This approach will enable us to use our knowledge of and access to markets in order to support our assets to identify opportunities to decarbonise in a commercially-sensible manner, as well as to manage their power agreements and carbon credits.

Strategic partnerships

During 2021, recognising the need for strategic partnerships between raw material and battery producers to support the delivery of our net zero ambition, we signed a number of long-term supply agreements for green aluminium and cobalt.

In February, Glencore and Century Aluminium Company, in which we have a minority interest, agreed to supply Natur-Al™ aluminium for five years to Austrian firm Hammerer Aluminium Industries.

Natur-Al™ aluminium has direct CO₂ levels below two tonnes of CO₂ per tonne of aluminium – one of the lowest CO₂ footprints in the world for the metal. The total CO₂ footprint is four tonnes per tonne of aluminium, less than one-quarter of the industry average.

In August, we announced our investment in Britishvolt, the UK's foremost investor in lithium-ion battery cell technologies and associated research and development. Britishvolt aims to produce responsibly manufactured battery cells, primarily to power electric vehicles. We also entered into a long-term strategic partnership with Britishvolt for the supply of responsibly sourced cobalt.

In November, we signed an agreement with FREYR to supply 1,500 tonnes in the form of cobalt cut cathodes made from partially recycled cobalt from Nikkelverk, our Norwegian refinery. This ethically sourced cobalt will be a core component in FREYR's lithium-ion battery (LIB) cells, which are used for stationary energy storage, electric mobility, and marine applications.



Supporting uptake and integration of abatement



We recognise the importance of abatement mechanisms such as CCUS to achieve the goals of the Paris Agreement.

Development and deployment of these mechanisms requires collective action; we are supporting these efforts directly and through policy advocacy.

Our wholly-owned Carbon Transport and Storage Company (CTSCo) Project aims to demonstrate carbon capture, use and storage (CCUS) technology, which will enable our customers and other users to improve the management and reduction of their emissions. It is focused on:

- Capturing CO₂ from a coal-fired power station in Queensland; and
- Permanently storing the CO₂ deep underground.

The CTSCo Project has the potential to store significant volumes of CO₂ to reduce existing and future sources of industrial emissions. This could improve energy security for the national electricity market and maintain and grow jobs in regional Queensland, as well as enable future industries including hydrogen production while also contributing to Australian and Queensland Government climate and emission reduction goals.

Key funding and project participants include Glencore, Low Emission Technology Australia, Australian National Low Emissions Coal Research

and Development and the Australian Government. A final investment decision on the CTSCo Project is expected in 2022.

In April 2021, China Huaneng Group Clean Energy Research Institute Co., Ltd., one of the world's largest energy and technology companies, and CTSCo agreed to cooperate on CCUS technology. This is China's first participation in an integrated international CCS project.

The CTSCo project will use China Huaneng's carbon capture technology at the Millmerran coal fired power station to capture a stream of CO₂, which will then be transported and stored permanently in a non-potable aquifer at a depth of more than 2 kilometres.

The CTSCo Project is one of Australia's most advanced onshore CCUS projects.

Why the world needs carbon capture and storage (CCS)

CCS is an integrated suite of technologies that can prevent large quantities of CO₂ from being released into the atmosphere. CO₂ is captured prior to emission and then injected deep into a rock formation for permanent storage.

According to the IPCC, all pathways that limit global warming to 1.5 degrees require both technology and nature-based CO₂ removal. CCS provides the technology-based solution.

CCS enables the removal of CO₂ emissions at their source and is the only technology available today that can decarbonise hard-to-abate sectors such as cement and steel.

CCS is a proven technology. Currently there are 27 large-scale CCS facilities in commercial operation, four in construction and 58 in advanced development stage. These facilities are already capturing nearly 40 million tonnes of CO₂ per annum and more than 260 million tonnes of CO₂ has been safely injected underground.

The US Section 45 of the Internal Revenue Code was amended to offer a tax credit for each metric tonne of CO₂ captured and stored. As a result of this tax credit, there are now more than 36 CCS projects under development in the US.



Blue hydrogen

We are investing in a range of low emission technologies, such as CCUS, which will reduce emissions from coal and other fossil fuels and potentially provide a pathway to blue hydrogen production.

Demand for hydrogen in 2020 was 90Mt with almost all of this volume being produced by transformation of fossil fuels with only 0.7Mt coming from plants fitted with CCUS. In 2020 just 30kt or 0.03% of hydrogen was produced from water electrolysis.

The IEA scenarios indicate that by 2030 hydrogen demand could range from 120Mtpa to 210Mtpa with between 10% and 40% of production coming from electrolysis (green hydrogen) and the balance being from fossil fuel transformation with blue hydrogen being between 15% and 30% of global supply. Hydrogen can be used for low-carbon energy such as transport, power and steel production.

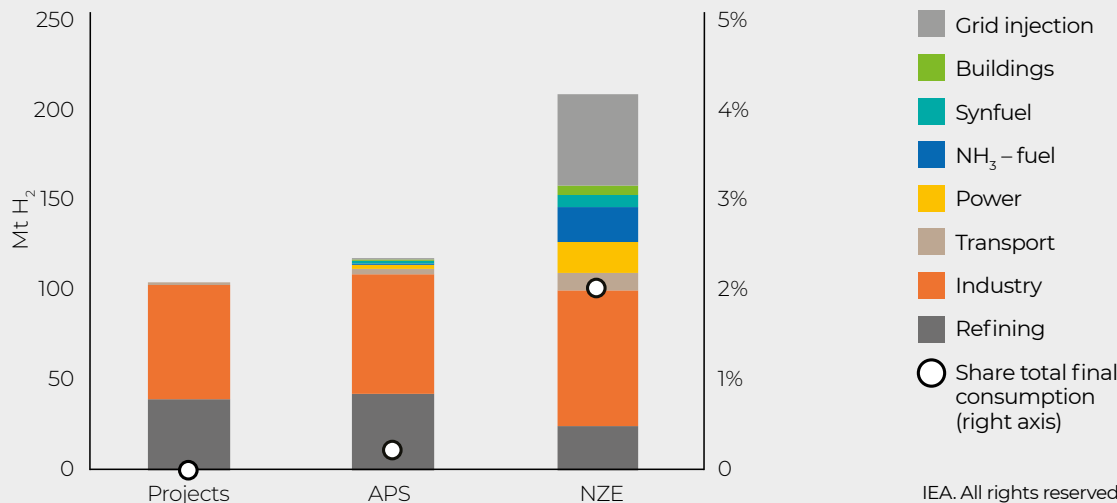
Fossil fuel transformation processes rely on gas or coal as the source fuel. As coal is gasified, its gas is split into hydrogen

and CO₂. The CO₂ produced by the process is captured and stored underground utilising CCS technology. As the coal gasification process is exothermic, it generates the necessary power for the process, reducing the overall energy requirements.

Further processing of the hydrogen into its liquid form or into ammonia which acts as a hydrogen carrier are possible. Ammonia has the advantage of being used directly as a fuel for ships and power plants or as a higher density energy carrier for later reconversion to hydrogen gas.

Reducing Scope 3 emissions

Hydrogen demand in the Projects case, Announced Pledges and Net zero Emissions scenarios, 2030



Utilising technology to improve resource efficiency



As both policy and consumer demands drive the move towards emissions reductions and a circular economy, technological developments are required to meet these ambitions.

There is increasing recognition of the need to increase the use of secondary metals, which our recycling business is well placed to meet.

We are founding members of the World Economic Forum's Circular Economy Partnership. We participate in the initiative's projects and work streams.

Glencore has over 75 years of experience in the recycling business and actively recycles copper, nickel, cobalt, zinc and precious metals. By responsibly recycling these metals, we contribute to the circular economy, diverting materials from landfill and minimising environmental impacts.

Recycling uses significantly less energy, 80%-90% less for copper for example, than mining and smelting primary metal. Scrap typically accounts for about a third of the roughly 30 million tonnes of annual global copper supplies.

Our copper and electronic waste recycling business was one of the world's first, and is North America's largest for end of life electronics. It is a market leader in the recovery of copper and precious metals from recyclable feeds.

As part of our net zero ambition in general, and with a goal to expand our recycling footprint across the commodity complex, we are looking to invest in capacity expansions in our core markets of Europe and North America, as well as to enter new markets that

currently lack formal and responsible recycling outlets for end of life materials. As these plans are firmed up and executed, we will provide more details on them.

During 2020, we recovered around 27,000 tonnes of copper, 132,000 ounces of gold, 1.3 million ounces of silver, 16,000 ounces of palladium, and 5,000 ounces of platinum from electronic scrap and other recycling feeds. We have recycled more than one million tonnes of electronic scrap since the 1990s.

In addition our nickel business is one of the world's largest processors of secondary nickel- and cobalt-bearing materials. Our Sudbury smelter in Canada and Nikkelverk refinery in Norway process alloy scrap, battery materials, plating residues and spent catalysts. These facilities are best in class and operate to the strictest environmental emission standards. Our nickel business was among a consortium of shareholders in the recent acquisition of AGMET, a leading recycler of metal-bearing industrial products in North America.

In Italy, our Portovesme lead and zinc smelter processes electric arc furnace (EAF) steel dust. EAF dust is a zinc-containing by-product of the steel recycling process, and our recycling and processing of this material avoids it be sent to landfill. In 2020, we recovered approximately 57,000 tonnes of zinc

directly from EAF dust. Glencore smelters also recovered nearly 110,000 tonnes of zinc from treatment of waelz oxides, which are also derived from the industry's EAF dust residues.

Any lead recovered from this process is treated on site. In addition, our smelters treat spent car battery paste, mined lead concentrates and zinc smelter residues to produce refined lead.



Transparent approach



Reporting on our progress and performance

Through regular clear and accurate disclosure of our actions to reduce emissions, we can support the understanding of our performance and progress, as well as set out how policy and technology developments create opportunities and risks for our portfolio.

We continue to see growing interest in climate change and its related topics from the financial community, including our investors, insurers and relationship banks. We regularly discuss climate change with these stakeholders and incorporate feedback from these meetings into the development of our climate change strategy.

At our 2021 AGM, we provided our shareholders with their first advisory vote on our three-yearly climate action transition plan. The plan received 94.4% of votes in favour. Going forward, we will provide our shareholders with an advisory vote at our AGM on our three-yearly climate action transition plan and its intervening progress reports.

We recognise the importance of transparently reporting on our approach towards managing climate change within our business and progress towards delivering our targets and ambitions. We were an early supporter of the voluntary guidance on consistent climate-related financial disclosures produced by the Taskforce on Climate-related Financial Disclosures

(TCFD). We are pleased to support the TCFD guidance and implement its recommendations in our annual reporting.

We note that both the UK and Switzerland have introduced reporting requirements that make disclosures against the TCFD mandatory. We believe that this approach will drive greater consistency in reporting on climate-related risks and opportunities and enable increased comparability between companies.

We track climate policy and regulatory developments, including changes to NDCs, in both our operating countries and our products' end markets.

We believe that it is appropriate that we take an active and constructive role in public policy development, either directly or indirectly through our membership of industry organisations. Evolving regulatory developments and scrutiny of our advocacy activities require that we hold consistent positions on policy.

We communicate these positions both directly through our engagement with government representatives and policy makers, as well as through the industry organisations in which we hold membership.

Each year, we undertake an assessment of both our direct and indirect lobbying

on climate-related topics and evaluate any statements, both internally generated or made by an external organisation in which Glencore is a member, on alignment with our support for the goals of the Paris Agreement. Our approach improves our understanding of the positions and advocacy undertaken on climate change by our industry organisations. We publish an annual review on our findings on our own statements on the goals of the Paris Agreement, as well as the positions taken by our industry organisations.

Our 2021 review of our direct and indirect lobbying on climate-related topics is available on pages 33 to 38.



Review of industry organisations

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2021 review of our industry organisations ^{TCFD}

We annually review our direct lobbying activities and the positions on climate change taken by our industry organisations to assess alignment with our commitment to the goals of the Paris Agreement.

Annual review process

Our annual review considers the degree to which Glencore's and our industry organisations' positions and activities relating to climate change and energy align with our climate change position and the goals of the Paris Agreement. We also seek to ensure that these positions express support for the United Nations Sustainable Development Goals (UN SDGs).

For our activities we assess our communication materials developed during the year that reference climate change, energy and related topics. This includes materials relating to our direct advocacy activities with government representatives, made either as Glencore or on behalf of one of our industry organisations.

For our industry organisations, we have first confirmed those in which we hold membership and the key Glencore contact, as well as the membership fees paid.

The full list of identified organisations is set out in Appendix Three - Industry Organisations.

We then identified the organisations with formal positions on climate change and energy and/or undertaking related advocacy activities, and whether these align with our policy positions.

Membership fees

For each of our industry organisations, we pay annual fees. Organisations calculate their fees as a fixed amount for all members or as a proportion of annual revenue or production volumes. Generally, organisations do not assign membership fees to a particular purpose or activity. On some occasions, we may pay additional fees for one-off projects. During 2021, the organisations to which we paid fees in excess of US\$200,000 were:

Organisation	US\$
International Copper Association	2,620,000
Minerals Council of Australia	2,345,128
Nickel Institute	1,468,445
Cobalt Institute	1,464,690
ICMM	803,228
Queensland Resources Council	680,637
NSW Minerals Council	660,846
International Zinc Association	560,000
Sociedad Nacional de Minería, Petróleo y Energía - (Perú)	377,275
Minerals Council South Africa	323,975
International Lead Association	286,500

Key findings

Our 2021 review found that of the nearly 100 organisations in which we hold a membership, the vast majority do not have a climate change statement and do not undertake climate-related advocacy, instead focusing on regional- and/or commodity-specific activities.

In line with last year's review, our assessment this year identified three regions/countries, where there has been significant discussion on climate policies: Australia, Europe and South Africa.

Within these jurisdictions, we are members of a number of active industry organisations and our findings focus on their climate-related positions and advocacy activities.

Following our review, which included an in-depth review of the advocacy activities of the Minerals Council of South Africa and the World Coal Association, we have signalled our intent to exit from the World Coal Association. We anticipate this process to complete early next year.



Review of industry organisations

Australia**Key policy developments**

In 2021, prior to the COP26 meetings in Glasgow, the Australian government released its Long-Term Emissions Reduction Plan, which has the stated aim of achieving net zero emissions by 2050.

This marks an increase in Australia's climate ambition having previously committed to a 26-28% reduction of GHG emissions by 2030 on 2005 levels under the Paris Agreement. The government has forecast that it is on track to reduce emissions by up to 35% by 2030, well above the current target of 26-28%.

The centrepiece of this latest policy announcement is a technology-led approach outlined in the Technology Investment Roadmap which commits the Government to invest AUD\$20 billion in low emissions technologies by 2030.

The technologies prioritised for government, research and private sector collaboration are hydrogen, energy storage, low-cost solar, green steel and aluminium, soil carbon, carbon capture, use and storage, and future fuels and vehicles.

Australia continues to apply the Safeguard Mechanism policy which acts like a baseline and credit scheme. Covered facilities are required to manage their emissions profile in line with set

baselines and when these are exceeded, these incur a penalty or a requirement to make good by purchasing Australian Carbon Credit Units corresponding to the baseline over run.

The safeguard mechanism is administered through the National Greenhouse and Energy Reporting (NGER) scheme and the Government's Clean Energy Regulator. The Safeguard Mechanism will transition to new baseline setting arrangements for the 2021-22 compliance period.

Our activities

During 2021, in Australia, our direct climate-related advocacy activities have primarily related to our wholly-owned subsidiary, the Carbon Transport and Storage Company Pty Ltd (CTSCo), which aims to demonstrate Carbon Capture Use and Storage (CCUS) technology on an industrial scale in Queensland.

Further information on CTSCo is available on page 28.

Active industry organisations
Minerals Council of Australia

The Minerals Council of Australia (MCA) is the leading advocate for the minerals industry in Australia across a range of public policy topics including, but not limited to, climate change, indigenous relations, sustainability and economic reform.

The MCA recognises that it cannot have a 'one size fits all' approach to climate

change matters due to the diversity of its membership. However, through its Energy and Climate Committee, which Glencore co-chairs, MCA has developed and published a Climate Action Plan (CAP).

The CAP clearly states MCA's commitment to the Paris Agreement and its goal of net zero emissions and focuses on technology, transparency in reporting and knowledge sharing. The CAP notes the transition to a lower emissions future is a global undertaking of major technological, economic and social challenge in which Australia and the minerals sector must play their part. The CAP calls for a stable national policy framework to support rapid action to achieve the ambition of net zero emissions in Australia.

The CAP informs the MCA's engagement with the Australian government on climate change topics and has identified a series of actions focused on three key themes:

1. Supporting developing technology pathways to achieve significant reductions in Australia's greenhouse emissions;
2. Increasing transparency of climate change related reporting and informed advocacy; and
3. Knowledge sharing of the sector's responses to addressing climate change.

In 2021, MCA members committed to an ambition of achieving net zero by 2050.

Europe**Our activities**

Glencore's advocacy in the EU and its member states is mostly through industry organisations, in particular Eurometaux, the International Copper Association and the Nickel Institute. Particularly on EC policy development, our engagement is through participating in relevant organisations' working groups. We also hold memberships in a number of organisations that focus on achieving product compliance with the EC's REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) standards.

Active industry organisations
Eurometaux

Eurometaux represents the interests of the non-ferrous metals industry (producers and recyclers) with EU policy makers. It advocates on European policies and regulation, with a focus on energy and climate change, chemicals management, international trade and sustainability.

Eurometaux recognises the need for a global approach to limit climate change to below two degrees, and notes the role of metals in enabling the transition and the steps the European metals sector is taking by reducing greenhouse gas emissions in production processes. It also expresses concern that the global imbalances in climate regulations



Review of industry organisations

threaten European producers' competitiveness.

In Eurometaux, we are involved in a number of task forces and working groups. Directly, through our European-based zinc and nickel assets, and indirectly through Eurometaux, we are endorsing the development of the European Raw Materials Alliance (ERMA), which is a response to the European Union's 2020 Critical Raw Materials list, which aims to develop more resilient European value chains. ERMA supports the implementation of Europe's circular economy and recognises that raw materials are key to achieving Europe's ambition of climate neutrality in 2050.

Eurometaux recognises that the European Union's Green Deal will provide both challenges and opportunities for its members. While the Green Deal is likely to significantly increase demand for metals, Eurometaux is highlighting the need for a level playing field through adequate carbon leakage measures delivered by a globally-focused competition policy and an assertive EU trade policy.

Currently, non-ferrous metals producers are subject to the EU Emissions Trading System and are recognised on the carbon leakage list, receiving carbon leakage protection in the form of free allowances (for direct CO₂ emissions) and compensation for indirect CO₂ emissions costs (embedded in electricity bills). Eurometaux has engaged with the EC on its planned Carbon Border Adjustment Mechanism, proposing alternative carbon leakage provisions that protect power-intensive industries and raising awareness of the complexity of costs arising from indirect emissions.

International Copper Association

The International Copper Association (ICA) brings together the copper industry to support markets for copper while making a positive contribution to the delivery of UN SDGs.

ICA's strategy focuses on industry reputation building, material stewardship, clean energy transition and climate change mitigation and green and healthy buildings. ICA works to ensure its industry-leading members maintain their license to operate and achieve fair market access for their products through proactive advocacy toward government and regulators.

ICA leads United for Efficiency (U4E), along with the United Nations Environment Programme, a global effort that supports developing countries and emerging economies to move their markets to energy-efficient appliances and equipment, in support of the Paris Climate Change Agreement. ICA also recently founded the Cornerstone of Rural Electrification (CORE), which operates at the nexus of energy access and energy efficiency, to ensure the principles of sustainability, safety and reliability are embedded in efforts to realize the goal of universal access to energy by 2030.

In Europe, the ICA is active in promoting the role of copper in the EU's Green Deal.

The Nickel Institute

The Nickel Institute (NI) is the global association of leading primary nickel producers. It encourages markets for new and existing nickel applications and undertakes scientific research relevant to human health and the environment.

It promotes the long-term use of nickel to contribute to a sustainable future.

NI supports the aims of the Paris Agreement and UN SDGs. It promotes nickel's role in addressing climate change as part of the solution for a low carbon economy and in delivering the UN SDGs through nickel's contribution to economic development. It reflects this position in its lobbying activities.

While nickel production is energy intensive, its use in a wide range of applications that significantly reduce generation of greenhouse gases during their use outweighs this intensive energy use. For example, nickel is a major cathode material in lithium ion batteries used in electrical vehicles. It is also widely used in different renewable energy technologies, such as hydropower, wind, geothermal, solar, biomass and ocean wave energy.

The NI advocates for full lifecycle thinking when assessing materials and technologies and makes data and technical information available. It works with decision makers and key actors in the value chain to ensure that they understand the importance and benefits of nickel-containing materials and make informed public policy and materials choices from a sustainability perspective.



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South Africa

Key policy developments

The National Treasury and the Department of Fisheries, Forestry and the Environment (DFFE) have driven South African climate change legislation. In 2017, DEFF mandated compulsory greenhouse gas (GHG) reporting and mitigation planning and in 2019, the National Treasury implemented a carbon tax for emitters above a certain threshold. DFFE is currently preparing general climate change legislation to bring associated regulations under a single act that also includes carbon budgeting and sectoral targeting.

The National Climate Change Response Policy (NCCRP) sets out a plan for an effective national climate change response that ensures a long-term just transition to a climate resilient and lower carbon economy and society. The National Climate Change Adaptation Strategy (NCCAS) underpins the delivery of the NCCRP through establishing a common vision of climate change adaptation and resilience as well as outlining priority areas for achieving the vision. The NCCAS aligns with South Africa's commitment to the goals of the Paris Agreement.

In line with the NCCRP, South Africa has also implemented a mitigation system with various mitigation policy instruments such as pollution prevention plans and carbon budgets

(voluntary until 2023), which are referenced as mitigation plans in the government's climate change bill, which is in development.

The Carbon Tax Act, ratified in 2019, supports the ambitions of the Policy through a tax on CO₂ equivalent of scope 1 greenhouse gas emissions. The government will implement the tax in two phases, which will use South Africa's polluter-pays principle that incentivises firms to adopt cleaner technologies. During its first phase, which runs until 31 December 2022, carbon tax for electricity and diesel fuel are passed through to the consumer, while companies pay an environmental levy on electricity and diesel, which is set at the cost of carbon tax. As such, carbon tax is also applied to scope 2 emissions. Its second phase will reflect the findings of a review of progress in reducing GHG emissions in line with South African's Nationally Determined Contribution (NDC) commitments.

South Africa's Integrated Resource Plan (IRP), updated in 2019, specifies how the nation transitions to a lower-carbon economy by changing its electricity generation technology mix through an increase in renewables and retiring coal assets. The IRP is an important factor for grid stability and reducing emissions. The IRP projects the electricity tariff, as well as long-term emission projections.

Our activities

We have directly inputted into the work of the Energy Intensive Users Group (EIUG), Ferro Alloys Producers Association (FAPA), Minerals Council of South Africa (MCSA), South African Petroleum Industry Association (SAPIA) and Business Unity of South Africa (BUSA) on the quality and affordability of energy, which has received ministerial and industry recognition. Glencore is an active and engaged member of various advocacy groups on the security of supply and affordable electricity tariffs.

While we are supportive of the South African government's efforts to address climate change, we are calling for clarity and certainty on the mechanisms used in key legislation, such as the second phase of carbon tax and carbon budgets. We are an active member in the forums that provide constructive input to the South African government in developing enabling legislation and implementation tools to address climate change.

Through our membership in the EIUG and FAPA we have participated in several multilateral engagements on the IRP-related industry energy tariff pricing with Department of Mineral Resources and Energy (DMRE), the state-energy provider (Eskom), National Energy Regulator of South Africa (NERSA) and MCSA.

Glencore participates in the environmental policy committees of MCSA, FAPA and BUSA. The members of these organisations' environmental policy committees regularly collaborate on a range of topics, including co-ordinated inputs into the development of climate change related policies. These organisations also utilise various platforms to engage with and lobby government on taking into consideration business and industry interests during policy development.

Astron Energy, part of our oil commodity department, has, through its membership of the South African Petroleum Industry Association (SAPIA), participated in round tables and meetings with government on climate change topics. These have included meeting with the DMRE on a carbon tax pass-through mechanism and the DFFE on proposed greenhouse gas performance guidelines for the oil and gas sector.

It has also attended BUSA and DFFE bilateral events on potential analysis and systems for mitigation, carbon budgets and integrated mitigation.

Astron Energy participated in a pilot of South Africa's online greenhouse gas reporting system.



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Active industry organisations*Energy Intensive Users Group (EIUG)*

The EIUG is an association of energy intensive consumers whose members account for over 40% of the electrical energy consumed in South Africa. The EIUG has significant technical expertise on energy matters. It is a respected and non-partisan organisation dedicated to working towards a sustainable energy supply industry.

Through the EIUG, we are taking part in a technical task team for large industry power users to input into the update of the regulatory power quality standard (NRS 048) to enable it to reflect the current electricity supply industry, economic situation and the need for a just transition. The task team also considers the role of renewable energy and independent power producers.

Through EIUG, we participates in a BUSA working group that looks at tariffs and renewable energy.

Ferro Alloys Producers Association (FAPA)

FAPA is an association of ferroalloys producers and is mandated by its members to call for the alignment of the carbon tax and carbon budgets instruments in phase 2 of the carbon tax. FAPA proposed a cap and trade system that aligns with the international cost of carbon, through taxing at a higher rate those emissions exceeding the carbon

budget. This aligns with the goals of the Paris Agreement, while supporting the ferroalloys industry to continue production in South Africa. It calls for a transparent and methodological approach to allocating carbon budgets in alignment with South Africa's NDC and for ongoing engagements with the regulator.

FAPA also called for Scope 2 emission reduction projects to form part of emission reduction measures for the Pollution Prevention Plan (PPP) and carbon budget achievements. This approach reflects that there is little opportunity to reduce Scope 1 emissions in the ferrochrome production process at this time. The industry's emission reduction opportunities lie in reducing its Scope 2 emissions. However, the PPP does not currently accept this as a means to mitigate carbon emissions liable for carbon tax.

This approach would also enable the funds currently accrued for carbon tax to be spent on carbon emission reduction projects. Glencore took a key role in developing this position.

Minerals Council of South Africa (MCSA)

MCSA is a membership-based association representing the South African mining industry. MCSA is mandated by its members to support and promote the mining industry in South Africa, through providing strategic

services in various policy and technical aspects, including lobbying and advocacy on behalf of members. MCSA represents the South African mining industry on various initiatives and issues such as environment, economics, health, safety, employee relations, social and legal.

MCSA undertakes direct and indirect discussions with the South African government on a broad range of mining-related topics. During 2021, MCSA's climate change engagement largely focussed on overall mitigation system such as GHG reporting, carbon budgets, the PPP, carbon tax regulations and related instruments. It has advocated on the misalignment of the carbon tax and carbon budget's proposed two-phase methodology.

MCSA was instrumental in proposing performance benchmarks for gold, platinum and coal, which enabled members to realise a 5% carbon tax allowance. MCSA is not against the carbon tax or budget, but is advocating for a streamlined single carbon management policy framework.

MCSA is part of the broader business constituency negotiating on the climate change bill at the National Economic Development and Labour Council, to ensure the needs of the mining industry are reflected in the development of the Act.

It also inputs into the shaping and implementation of the Climate Change Act, PPP, Mitigation Potential Analysis and Sector Emission Targets. It lobbies for an approach that reflects the needs of its member companies and proposes economically viable methods to align the carbon tax with the international cost of carbon.

MCSA is engaging with the Presidential Climate Commission on its work on developing an industry transition framework. It is also supporting Eskom's efforts to advance South Africa's just energy transition.

The aim of MCSA's advocacy activities is to seek long-term policy certainty that supports investment in renewable energy and secures a stable power supply, while ensuring a smooth implementation of legal and policy requirements that enable the continued operation of businesses through the transition to a lower-carbon economy.

South African Petroleum Industry Association (SAPIA)

SAPIA represents the major petroleum and liquefied petroleum gas companies in South Africa. It plays a strategic role in addressing a range of common issues relating to the refining, distribution and marketing of petroleum and LPG products, as well as promoting the industry's environmental and socio-economic progress. SAPIA fulfils this



Review of industry organisations

role by proactively engaging with key stakeholders, providing research information, expert advice and communicating the industry's views to government, members of the public and media.

These main petroleum and LPG member companies of SAPIA have stated their support for the goals of the Paris Agreement.

Astron Energy holds the chair of the SAPIA Advisory Committee for Climate Change and participates in the tax and economic regulations committee. It provides input into SAPIA activities on environmental legislation including the carbon tax and is involved in SAPIA's working group that advises the DMRE and DFFE on the development of an appropriate methodology to measure emission factors for liquid fuels.

Astron Energy provided input into the positions adopted by SAPIA, which include advocating for a pass-through mechanism for liquid fuels.

Business Unity South Africa (BUSA)

BUSA represents South Africa's private sector and its members include corporate representative organisations, chambers of commerce and industry, professional organisations and corporate members. While Glencore is not a direct member of BUSA, its membership of

MCSA and SAPIA give it access to BUSA activities and the ability to input into its work streams.

BUSA has a formal position on carbon tax and carbon budgets that reflects those of its members, including those mentioned above. It engages with the DFFE, National Treasury and South African Regulatory Service on alignment between these Departments for phase 2 of the carbon tax and budgets.

As a member of BUSA's working group on a just energy transition for South Africa, Glencore represents the interests of our ferroalloys business, as well as those of FAPA and MCSA. We are also active in a number of BUSA task teams looking at just transition and skills development, electricity and energy policies, and energy tariffs. Our inputs into these work streams reflect our recognition that a multi-stakeholder approach is essential for achieving the goals of the Paris Agreement.



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Appendix One – Defining our emissions targets

Defining our emissions targets and demonstrate that we are NZE-aligned in the medium term.

Emissions reduction targets and ambitions have multiple interpretations. For clarity, Glencore has considered the range of 1.5°C benchmarks as reported by the IPCC Special Report: Global Warming of 1.5°C, table 2.4 and NZE2050 scenarios and, specifically, the gross global CO₂ emissions from fossil fuel combustion.

Working from actual fossil fuel CO₂ emissions as reported by IEA up to 2019 and including their latest estimate for 2020.

Using 2019 as a baseline, the IPCC defines an emissions reduction range in 2035 of between 27.5% (1.5°C high overshoot) and 51.5% (below 1.5°C, matching IEA's NZE2050) giving a mathematical midpoint of 39.5%, close

to the 41% defined by IEA's SDS and just shy of the IPCC's no/limited overshoot scenario.

Based on this data, we have adopted a target of 50% Scope 1, 2 and 3 emissions reduction by 2035. The short term target of 15% Scope 1, 2 and 3 emissions reduction by 2026 is interpolated from the 2035 emissions reduction target and is within the 1.5 degree target range as defined by the IPCC scenarios.

Our net zero Scope 1, 2 and 3 emissions ambition in 2050 is substantially greater than the fossil fuel combustion emissions reduction range defined by the IPCC and well below the IEA's NZE2050, where absolute emissions remain at 8 billion tonnes CO₂ per annum, and are offset by CCUS and DAC to deliver a net zero emissions outcome.



Appendix Two – Mapping our disclosures to the Net-Zero Company Benchmark

The Climate Action 100+ Net-Zero Company Benchmark assesses companies on their progress in the transition to a net zero future, using publicly disclosed information.

Benchmark indicators and sub-indicators

Our approach

Disclosure Indicator 1: Net-zero GHG Emissions by 2050 (or sooner) ambition

Sub-indicator 1.1: The company has set an ambition to achieve net-zero GHG emissions by 2050 or sooner.

Our ambition is to achieve net zero total (Scope 1, 2 and 3) emissions by 2050.

Disclosure Indicator 2: Long-term (2036-2050) GHG reduction target(s)

Sub-indicator 2.1: The company has set a long-term (2036-2050) target for reducing its GHG emissions on a clearly defined scope of emissions.

Our longer-term ambition is to achieve net zero total emissions by 2050.

Sub-indicator 2.2: The long-term (2036 to 2050) GHG reduction target covers at least 95% of scope 1 & 2 emissions and the most relevant scope 3 emissions (where applicable).

Our long-term ambition covers our total emissions – Scopes 1, 2 and 3.

Sub-indicator 2.3: The long-term target is aligned with a trajectory to achieve the Paris Agreement goal of limiting global temperature increase to 1.5°C with low or no overshoot (equivalent to IPCC Special Report on 1.5° Celsius pathway P1 or net-zero emissions by 2050).

We use the IPCC scenarios to illustrate our compliance with the net zero ambition.

Disclosure Indicator 3: Medium-term (2026-2035) GHG reduction target

Sub-indicator 3.1: The company has set a medium-term (2026 to 2035) target for reducing its GHG emissions on a clearly defined scope of emissions.

Our short-term target commits us to achieving a 15% reduction on our total emissions by 2026 on 2019 levels. Our medium-term target commits us to achieving a 50% reduction on our total emissions by 2035 on 2019 levels.

Sub-indicator 3.2: The medium-term (2026 to 2035) GHG reduction target covers at least 95% of scope 1 & 2 emissions and the most relevant scope 3 emissions (where applicable).

Our short- and medium-term targets covers our total emissions – Scope 1, 2 and 3.

Sub-indicator 3.3: The medium-term target is aligned with a trajectory to achieve the Paris Agreement goal of limiting global temperature increase to 1.5°C with low or no overshoot (equivalent to the IPCC Special Report on 1.5°C pathway P1 or net-zero emissions by 2050).

We use the IPCC scenarios to illustrate our compliance with the net zero ambition. Our short-term (2026) target lies within the range of IPCC 1.5 degree scenarios and our medium-term (2035) target is aligned to the IEA NZE 2050 scenario, which is consistent with IPCC SSP1-1.9.

Disclosure Indicator 4: Short-term (up to 2025) GHG reduction target

Sub-indicator 4.1: The company has set a short-term (up to 2025) target for reducing its GHG emissions on a clearly defined scope of emissions.

Our short-term target commits us to achieving a 15% reduction on our total emissions by 2026 on 2019 levels.

Sub-indicator 4.2: The short-term (up to 2025) GHG reduction target covers more than 95% of scope 1 & 2 emissions and the most relevant scope 3 emissions (where applicable).

Our short-term target covers our total emissions – Scope 1, 2 and 3.

Sub-indicator 4.3: The short-term target is aligned with a trajectory to achieve the Paris Agreement goal of limiting global temperature increase to 1.5°C with low or no overshoot (equivalent to IPCC Special Report on 1.5° Celsius pathway P1 or net-zero emissions by 2050).

We use the IPCC scenarios to illustrate our compliance with the net zero ambition. Our short-term (2026) target lies within the range of IPCC 1.5 degree scenarios.





Benchmark indicators and sub-indicators

Disclosure Indicator 5: Decarbonisation strategy

Sub-indicator 5.1: The company has a decarbonisation strategy to meet its long, medium and short-term GHG reduction targets.

Sub-indicator 5.2: The company's decarbonisation strategy includes a commitment to 'green revenues' from low carbon products and services.

Disclosure Indicator 6: Capital allocation alignment

Sub-indicator 6.1: The company is working to decarbonise its future capital expenditures.

Sub-indicator 6.2: The company discloses the methodology used to determine the Paris alignment of its future capital expenditures.

Our approach

We have identified seven core pathways to meet our short and medium-term targets, as well as our longer-term net-zero ambition. These are detailed on pages 13 to 31 of this report.

As one of the largest diversified natural resource companies in the world, we can support the delivery of the goals of the Paris Agreement by producing, recycling, marketing and supplying the metals and minerals that are essential to the transition to a low-carbon economy and to meeting the needs of everyday life.

Details on our revenues from these metals and minerals are disclosed in our Annual Report.

We have committed to prioritise investment in metals that support the transition to a low-carbon economy.

We recognise the importance of disclosing how we ensure our material capital expenditure and investments align with delivering our short- and medium-term targets and longer-term ambition, as well as the goals of the Paris Agreement. We transparently report in our Annual Report on our capital expenditure to develop, maintain and expand the production of metals essential to the transition to a low-carbon economy. We also disclose the costs associated with responsibly managing the decline of our coal assets.

Our current and forecast capital expenditure aligns with our emissions-reduction targets, reflecting our commitment to prioritise the development of our portfolio's transition metals. Running down our industrial energy portfolio will contribute to the reduction of our total emissions. Going forward, we have allocated capital to deplete our energy assets in a responsible manner that is consistent with our Values and our climate strategy. We expect that our capital spend on our coal business should decline commensurate with the decline of the portfolio.





Benchmark indicators and sub-indicators

Disclosure Indicator 7: Climate policy engagement

Sub-indicator 7.1: The company has a Paris-Agreement-aligned climate lobbying position and all of its direct lobbying activities are aligned with this.

Sub-indicator 7.2: The company has Paris-Agreement-aligned lobbying expectations for its trade associations, and it discloses its trade association memberships.

Sub-indicator 7.3: The company has a process to ensure its trade associations lobby in accordance with the Paris Agreement.

Disclosure Indicator 8: Climate Governance

Sub-indicator 8.1: The company's board has clear oversight of climate change.

Our approach

Our Values, Code of Conduct and Political Engagement Policy set out our expectations for our engagement in policy developments or emerging regulations. Glencore employees participating in these engagement activities are required to demonstrate our support for the goals of the Paris Agreement.

We undertake an annual review to assess Glencore's existing communication materials that reference climate change, energy and related topics. This includes our direct advocacy activities with government representatives, presentations – made either as Glencore or on behalf of one of our industry organisations – and licence applications, particularly for our coal business.

Our Values, Code of Conduct and Political Engagement Policy set out our expectations for the advocacy activities undertaken by our industry organisations in policy developments or emerging regulations. We also undertake an annual review of our direct and indirect advocacy activities, this is set out on pages 33 to 38.

Further information on our approach to our industry organisations is available on our website;

www.glencore.com/sustainability/esg-a-z/member-organisations

We undertake an annual review of the positions on climate change taken by our industry organisations to assess alignment with our commitment to the goals of the Paris Agreement. We disclose the findings of this review on pages 33 to 38 of this report.

Our Climate Change Taskforce (CCT) is accountable to our Board of Directors, to whom it provides regular progress and status updates. Its members include our Chief Executive, Chief Financial Officer, Head of Industrial Assets and Group General Counsel, as well as representatives from key corporate functions including investor relations, finance and sustainable development. Commodity departments, including heads of the departments and nominated representatives, participate in the working groups that form the CCT.

The CCT is responsible for overseeing our climate strategy and progress against our climate commitments.





Benchmark indicators and sub-indicators

Sub-indicator 8.2: The company's executive remuneration scheme incorporates climate change performance elements.

Sub-indicator 8.3: The board has sufficient capabilities/competencies to assess and manage climate-related risks and opportunities.

Disclosure Indicator 9: Just transition
This indicator is being further developed, and companies are not currently assessed.

Sub-indicator 9.1: The company considers the impacts from transitioning to a lower-carbon business model on its workers and communities.

Disclosure Indicator 10: TCFD Disclosure

Sub-indicator 10.1: The company has committed to implement the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD).

Sub-indicator 10.2: The company employs climate-scenario planning to test its strategic and operational resilience.

Our approach

Our Chief Executive Officer is the named executive for driving strategy, including climate, within our Board. As such, relevant performance indicators have been added to his remuneration package. For his annual variable compensation scorecard, 15% is for indicators that chart our progress towards our short- and medium-term absolute emission targets.

During 2021, our Board members received training on climate change. This included their duties as directors, legal risks, external expectations and details of our approach, targets and ambitions. It also emphasised the need for an effective integration of climate change into the Group's risk management processes and related Board oversight

We set out our approach to a just transition on page 23.

We support the Task Force on Climate-related Financial Disclosures' (TCFD) voluntary framework for the reporting of climate-related financial risk disclosures for use by lenders, insurers, investors and other stakeholders. Throughout this report, 'TCFD' is used to highlight content relevant to its disclosure recommendations.

We believe this report to be compliant with the expectations embedded in the TCFD framework.

We have adopted the IEA's global energy and emission scenarios and extended the scenario analysis to include the evolution of metals demand as the world transitions to greater electrification and adoption of metal-intensive wind, solar and battery technologies.

No single pathway can define how individual economies and the world will transition. These scenarios describe a range of potential outcomes dependent on the rate at which transition policies are implemented. We use each of these scenarios to test the resilience of our portfolio.

The scenarios provide for a range of outcomes in relation to energy demand, the energy mix, metals demand and climate. We continuously assess our business against these scenarios as part of our decision-making processes.



Appendix Three – Industry organisations

The full list of the industry organisations in which we hold a membership and that were included in this review are set out below. The identified organisations were correct at the time of this review's publication:

Global

- Cobalt Institute
- CONCAWE
- Extractive Industries Transparency Initiative
- Global Battery Alliance
- International Council for Metals & Minerals
- International Association of Independent Tanker Owners
- International Cadmium Association
- International Chromium Development Association
- International Copper Association
- International Energy Agency – Coal Industry Advisory Board
- International Lead Association
- International Manganese Institute
- International Molybdenum Association
- International Zinc Association
- Lower Olefins and Aromatics Reach Consortium
- Maritime Anti-Corruption Network
- Nickel Consortia
- Nickel Institute
- Partnering Against Corruption Initiative
- Responsible Minerals Initiative
- Vanitec
- World Coal Association
- World Economic Forum Platform for Accelerating the Circular Economy (PACE)

Africa

- Chad**
 - Chad Oil Operators Association
- South Africa**
 - African Refiners and Distributors Association
 - African Regional Standards Organisation
 - Business Unity South Africa
 - CoalTech Research Association
 - Energy Institute
 - Energy Intensive User Group
 - Engineering Council of South Africa
 - Ferro Alloys Producers Association
 - Mine Managers Association
 - Minerals Council South Africa
 - Mine Ventilation Society of South Africa
 - Mine Water Coordinating Body
 - NAPCOF
 - National Business Initiative
 - South African Bureau Of Standards
 - South African Coal Managers Association and associated sub associations (SACEA, SACAFMA, SACHRA, SACESHA)
 - South African Council for Natural Scientific Professions
 - Southern African Institute of Mechanical Engineering
 - Southern African Institute of Mining and Metallurgy
 - South African National Institute of Rock Engineers
 - South African Petroleum Industry Association

Australia

- Chamber of Minerals and Energy of Western Australia
- Low Emission Technology Australia (formally COAL21 Fund)
- Minerals Council of Australia
- NSW Minerals Council
- Queensland Resources Council

Europe

Belgium

- Aluminium REACH consortium
- Eurometaux
- European Copper Institute
- Cobalt REACH Consortium
- REACH Antimony
- REACH Arsenic
- REACH Cadmium
- REACH Copper Consortium
- REACH Lead consortium
- REACH Manganese Consortium
- REACH Nickel Consortium
- REACH Precious Metals
- REACH Selenium & Tellurium Consortium
- REACH Zinc
- Sulphuric acid REACH consortium
- The (REACH) Vanadium Consortium



Germany

- GDB (Non-Ferrous Metals Association)
- Wirtschaftsvereinigung Metalle (Non-Ferrous Metals Association)
- VCI (Chemicals Industry Association)

Italy

- Assomet (Non-Ferrous Metal Association)
- Confindustria (National Industrial Association)

Kazakhstan

- Association of Mining and Metallurgical Companies
- Electrical Energy Association of Kazakhstan
- National Chamber of Entrepreneurs
- Republican Association of Ore mining and Mining and Processing Enterprises

Spain

- AEGE (Association of Companies of Intensive Electricity Consumption)
- TEDFUN (Technical Association for Die Casting)

Switzerland

- Swiss American Chamber of Commerce
- Swiss British Chamber of Commerce
- SwissHoldings
- Zug Chamber of Commerce

North America – Canada

- Association de l'Exploration Minière du Québec
- Associations of Major Power Consumers of Ontario
- Association Minière du Québec
- Canadian Chamber of Commerce
- Canadian Mining Innovation Council
- Canadian Institute of Mining, Metallurgy and Petroleum
- Conseil du Patronat du Québec
- Conseil Patronal de l'Environnement du Québec
- Fédération Chambres de commerce du Québec
- Mining Association of Canada
- Ontario Chamber Commerce
- Ontario Mining Association

South America**Argentina**

- Argentine Mining Chamber (CAEM), Minera Aguilar
- Jujuy Mining Chamber
- San Juan Mining Chamber
- World Business Council for Sustainable Development (CEADS in Argentina)

Brazil

- Brasilcom (Federação Nacional das Distribuidoras de Combustíveis, Gás Natural e Bicomcombustíveis - National Federation of Fuel, Natural Gas and Biofuels Distributors)
- Institute for Development of Retailers

Chile

- Chile Mining Council

Peru

- Camara de Comercio Americana del PERU (MCHAM)
- Camara de Comercio de Lima
- Comité de Operaciones del Sistema Interconectado Nacional
- Sociedad Nacional de Minería, Petróleo y Energía - SNMPE



Glossary

CCUS

Carbon Capture, Utilisation and Storage

CO₂

Carbon dioxide

CA100+

Climate Action 100+

DAC

Direct air capture

EVs

Electric vehicles

FCEV

Fuel cell electric vehicles

GHG

Greenhouse gas

HELE

High-Efficiency Low Emission

IPCC

Intergovernmental Panel on
Climate Change

ICE vehicles

Internal-combustion engine vehicles

ICMM

International Council for Mining & Metals

IEA

International Energy Agency

MACC

Marginal Abatement Cost Curve.

NDCs

Nationally determined contributions

NZE 2050

Net Zero Emissions by 2050 Scenario

PEVs

Plug-in electric vehicles

solar PV

Solar photovoltaic

Supportive policy environment

Coordinated government policies, including incentives to drive accelerated uptake of lower carbon and decarbonisation technologies, and market based regulations governing industrial practices that drive a competitive, least cost emissions reduction approach, are critical to our ability to achieve our ambition of net zero total emissions by 2050

UNFCCC

United Nations Framework Convention on Climate Change

UN SDGs

United Nations Sustainable Development Goals



Important notice

Important notice concerning this report including forward-looking statements

This document contains statements that are, or may be deemed to be, forward-looking statements which are prospective in nature. These forward-looking statements may be identified by the use of forward-looking terminology, or the negative thereof such as outlook, plans, expects or does not expect, is expected, continues, assumes, is subject to, budget, scheduled, estimates, aims, forecasts, risks, intends, positioned, predicts, anticipates or does not anticipate, or believes, or variations of such words or comparable terminology and phrases or statements that certain actions, events or results may, could, should, shall, would, might or will be taken, occur or be achieved. Forward-looking statements are not based on historical facts, but rather on current predictions, expectations, beliefs, opinions, plans, objectives, goals, intentions and projections about future events, results of operations, prospects, financial condition and discussions of strategy.

By their nature, forward-looking statements involve known and unknown risks and uncertainties, many of which are beyond Glencore's control. Forward-looking statements are not guarantees of future performance and may and often do differ materially from actual results. Important factors that could cause these uncertainties include, but are not limited to, those disclosed the Principal Risk and Uncertainties section of the Annual Report 2020.

For example, our future revenues from our assets, projects or mines will be based, in part, on the market price of the commodity products produced, which may vary significantly from current levels. These may materially affect the timing and feasibility of particular developments. Other factors include (without limitation) the ability to produce and transport products profitably, demand for our products, changes to the assumptions regarding the recoverable value of our tangible and intangible assets, the effect of foreign currency exchange rates on market prices and operating costs, and actions by governmental authorities, such as changes in taxation or regulation, and political uncertainty.

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