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Australian Government
Department of Climate Change, Energy, the Environment and Water
Submission via the Department's Consultation Hub

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Re: Safeguard Mechanism Reform Consultation, Jan 2023

Rio Tinto welcomes the opportunity to make a submission to the Department of Climate Change, Energy, the Environment and Water ("the Department") on the Safeguard Mechanism Reform consultation paper (the "Consultation Paper").

As outlined in our earlier submission on 20 September 2022, Rio Tinto has financial interests in 20 facilities covered by the Safeguard Mechanism including aluminium smelters, alumina refineries, bauxite mines, iron ore mines and rail, marine shipping and ERA uranium mine closure activities. These facilities in total represent a material portion of the covered Scope 1 emissions in the Safeguard Mechanism.

Rio Tinto acknowledges that we have an important role to play in reducing emissions. As our Australian Chief Executive, I have spoken publicly in relation to our support for the Safeguard Mechanism reform and how "the government's climate ambitions align with our own commitment to net-zero emissions by 2050."

We thank the Department for the opportunity to engage on the development of a policy framework that will contribute to the delivery of Australia's emission reduction target and for working with industry on the pathway through the large and costly challenges of the decarbonisation transition.

Rio Tinto is committed to decarbonising our assets and has emissions reduction targets including reduction in Scope 1 & 2 levels by 50 per cent by 2030 and net zero by 2050.

Rio Tinto is a signatory to the Paris Pledge for Action in 2015, and supported the outcome agreed by 195 governments at the international climate negotiations at COP21. Rio Tinto also signed the International

Mining & Minerals Council (ICMM) Climate Change Position statement in 2021 which includes commitments to accelerate action and reduce to net-zero by 2050 or sooner.

Our Climate Change Reports provide detailed information on our Climate Action Plan, our progress so far on abatement, and how we are preparing our business for a low-carbon future.

Our Scope 1 & 2 emissions reduction targets cover our global business on an equity (financial ownership) basis and are measured against a 2018 base year. Rio Tinto has decarbonisation plans for our portfolio of assets and we are focused on reducing Scope 2 as well as Scope 1 emissions. We are progressing a number of Scope 2 reduction projects intended to reduce our business emissions that are not covered under the Safeguard Mechanism. We plan to reduce greenhouse gas emissions

through both operational and capital abatement projects, including investment in renewables and development of new technology solutions.

Safeguard Mechanism reform requires further changes

Baseline setting and declines

The Government's hybrid emissions approach is a mixture of facility-specific and industry-average emissions intensities (EIs). It is our strong view that, to give effect to the Government's policy intent the rate of change between moving facilities from facility-specific to industry-average EIs should be slowed during the transition period. Rio Tinto proposes that year one (FY2023-24) be set at 100% facility-specific intensity with a 5% increment to industry average year-on-year (i.e., FY2024-25 as 95% site specific:5% industry average, etc).

The rate of change from facility-specific to industry-average EIs does not impact the ability for the government to achieve the 43% reduction target but it does significantly impact the business viability of individual assets.

The design logic of the proposed scheme already incentivises abatement at the margin with the ability to gain Safeguard Mechanism Credits (SMCs) or lowering our compliance costs, so changing the baseline basis rapidly to 100% industry-average intensity is not required to achieve the targets. What is important is for the government to manage the magnitude of financial impacts that the Safeguard

Mechanism reforms impose on facilities that have a sizeable gap to reach industry-average EI. This can be mitigated by capping the maximum decline rate that any one facility should be asked to make in a single year, such as at 6%.

Trade-exposed baseline-adjusted (TEBA) facilities

Support for emissions-intensive trade-exposed (EITE) facilities is recognised as an important policy feature of the proposed Safeguard Mechanism changes. There are issues with the practical applicability of the TEBA test, which does not currently qualify EITE facilities with limited medium-term ability to abate Scope 1 emissions such as aluminium smelting. For products with high levels of value adding, revenue is a poor metric for determining risk of carbon leakage and business impact of compliance costs on high revenue but thin margin facilities, such as aluminium smelters and alumina refineries.

The TEBA test using compliance costs to revenue ratio does not work to qualify aluminium smelting which will be competitively disadvantaged by the reform without changes to the test.

Strategic metals and minerals like aluminium, alumina and steel are essential for Australia's energy transition and should qualify for lower decline rates.

Metals and minerals that are essential for the energy and emissions transition like aluminium, steel and alumina need robust domestic supply chains in Australia. A qualification for a slower decline rate based on a short list of industries that are recognised to be of strategic importance to Australia's transition to a low carbon future (e.g. aluminium, steel, alumina) should be strongly

considered. To ensure their ongoing viability they need to be eligible for smaller baseline declines as the standard decline rates would impact operational competitiveness and viability. There are carbon leakage risks if these trade-exposed industries do not have a pathway under the Safeguard Mechanism to qualify for a 2% decline rate.

The Safeguard Mechanism policy design in its current state would impose a year-on-year cost for aluminium smelting, with these facilities having minimal ability to abate more than ~2% out of the standard 34% required Scope 1 decline rate (cumulative 4.9% year on year). This would impose significant costs on operations that have no short-to-medium-term pathways to mitigate.

Multi-year monitoring period (MYMP)

The MYMP is an important flexibility mechanism in the policy that should be expanded to allow applications, not only for new technology but for any capital expenditure (such as major equipment replacement, retrofit or upgrade) that would lead to a step change reduction in Scope 1 emissions. This would recognise that all large decarbonisation investments take time to properly plan and implement, and greatly assist in supporting businesses through the transition, whilst not impacting the overall total decline of the scheme emissions.

The MYMP should be available to support industry through all major upgrades and new technology.

Declaration requirements should not impose sign-off obligations beyond level of project stage maturity and internal financial commitment at the time of application.

Recognition should also be given to eligibility for a grouping of larger decarbonisation projects being completed in parallel at a facility, rather than a single project test.

The MYMP qualification requirements include the formal signing of a declaration that the facility will implement the project and avoid excess emissions at the end of the period. This

declaration is problematic as it is asking businesses to commit with certainty to the investment and successful project conclusion before internal capital commitment, pilot trials or feasibility studies have been completed. We are concerned that retaining this type of formal declaration means that the MYMP will not meet the policy intent. Demonstration of a credible plan that the business is pursuing, as reviewed by a third-party auditor, should be the basis for qualification.

In addition to these changes to make the MYMP more workable, Rio Tinto requests the government consider further modifying the MYMP design to magnify the effect of co-investment from the Powering the Regions fund by reducing the requirement to purchase offsets where a company's decarbonisation project expenditure is significant in respect of a facility. Ways in which funding can be preferentially used for decarbonisation activities rather than compliance costs are important to explore to ensure business spend is directed towards abatement that is impactful on the national targets.

Our more detailed responses on these issues and to other elements of the policy design details in the Consultation paper are set out in the Appendix of this Submission. Rio Tinto forward to engaging further with the Department on the content of the Consultation Paper. We would welcome the opportunity to discuss this submission with you further. In the interim, if you have any questions, please contact Zoe Godijn (Zoe.Godijn@riotinto.com).

Yours sincerely



Kellie Parker
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Appendix: Further detail on specific matters from the Consultation Paper

Baseline setting and declines

The ability for businesses to deliver 4.9% reduction in the first year will be dictated by what abatement is already underway and the financial commitments already made to decarbonisation. Therefore, the starting position of year one (FY2023-24) should be at 100% facility-specific emissions intensity (EI). Moving to 4.9% in the first year will already be challenging enough for businesses and overlaying the impact of industry-average will not allow changes to action in the short time frame but will create additional financial burden.

There are several valid reasons why facilities can be above the industry-average intensity, which include plant and equipment technology, the availability and economics of low emissions fuels, the complexities with retrofitting equipment to use these low-emission fuels and raw material grade and quality. This is the case for the QAL and Yarwun alumina refineries. For a facility that is currently above industry average, the weighting proportion formulas compound the impact of the decline rate requiring much larger year on year reductions compared to the default 4.9%.

A fast rate of transition from facility-specific to industry-average emissions intensities has the potential to significantly change the competitiveness and business viability of assets especially within the same industry. In some instances, like alumina refining, there are substantial differences in the process energy requirements and equipment to convert different grades of bauxite to alumina via a high temperature versus low temperature Bayer process. As such, an Australian industry-based alumina production intensity value with a small sample size and wide variation in operational attributes provides significant costs for some and significant emissions credit earning capacity for others. This effect is amplified by applying a fast push from site-specific to industry-average EIs.

The reform will result in large competitiveness disadvantages in facilities higher than industry average. This will occur when much higher than 4.9% decline rates are required as the formula drives a higher contribution to industry-average intensity. To maintain ongoing viability of these facilities we see the need for a cap to be set for the maximum amount of emissions reduction a facility should be required to achieve within an individual year, to manage the business viability of assets that have large gaps to close to achieve industry average EIs. A decline rate cap of 6% per year would be reasonable, in Rio Tinto's view.

Alternatively, if the Government is concerned about how this type of facility decline cap would impact the ability for the overall safeguard mechanism facilities to reach the 100kt CO_{2-e} target, this could be set up as a collar and cap on a commodity basis where the decline rates are constrained on both maximum and minimum declines until the sector as a whole moves closer to the industry-average or below. This could be reviewed and applied on an exception basis when there is a large variation of EIs across a particular activity and this would mean that until the whole cohort of the same activity reduces consistently over time towards the target.

There are instances when major site works or contracting activities occur that use fuel and generate Scope 1 emissions but have no allocation under the baseline, due to not being related to production. This might include tailings dam capping at refineries or ex-refineries (legacy work), preparation of new mining areas, roads and infrastructure at existing facilities or capital upgrades/installation using cranes and mobile equipment. Rio Tinto would like more production variables to be considered to avoid disincentivising these important activities, which under some circumstances, would be below threshold and not covered by the Safeguard Mechanism, but happen to fall within existing large facility boundaries.

Trade-exposed baseline-declines (TEBA)

Aluminium smelters generate large amounts of Scope 1 process emissions from the inherent chemical reaction for converting alumina into aluminium using the Hall-Heroult process with carbon anodes and power. A new technology to use inert anodes is currently being developed on a research-scale but it is a complex and difficult operating process to adopt via retrofitting each individual smelter. It requires customised solutions for equipment and operating conditions that are site-specific. Inert anodes will not likely be in commercial operation in Australia before 2030, which means that the aluminium smelters have limited opportunity to reduce Scope 1 emissions until the technology is ready for deployment past 2030. Given the likely implementation timeline for inert anodes, the multi-year monitoring period (MYMP) will also not operate to support the aluminium smelters' decarbonisation timeframes.

Rio Tinto has significant concerns over the lack of recognition under this draft Safeguard Mechanism proposal for aluminium smelting operations, which have been recognised historically in Australia and in other climate policies internationally as emissions-intensive trade-exposed activities. The flexibility mechanisms, and in particular the TEBA test, do not work to mitigate the financial impacts on high value adding, high revenue, low margin assets. These operations have a large contribution of process emissions that are unable to be abated within the time period of the first reform timeframe to FY2029-30. Inert anode technology is not yet globally at full commercial scale and is complex and technically specific to each operation. For our smelters in Australia, Rio Tinto is actively working to reduce Scope 2 emissions. This repowering process will have a substantially positive impact on our facilities' emissions, but is not part of the Safeguard Mechanism framework.

Accordingly, the compliance cost per whole of facility revenue test is not a good measure for the risk of carbon leakage, as it does not take into consideration the profitability of the operation and the limitations of a facility to abate. Rio Tinto would like to see metals and minerals that are of strategic importance to the Australia's low carbon future - such as steel, alumina and aluminium - qualify to opt-in for a 2% decline rate until a step-change in abatement with new technology is achieved. It will be critical to the energy transition to have a strong domestic supply chain for aluminium, which is needed in the manufacture of equipment for renewable energy such as wind turbines, solar PVs and energy storage solutions. Without a test such as this or recognition of the specific abatement challenges facing this industry, aluminium smelters will be subject to a heavy cost of purchasing credits year on year for process emissions, which they will have minimal ability to control or abate. The government should have policy that recognises the ongoing importance of manufacturing in Australia, especially for strategic commodities that are important in a low-carbon economy.

Rio Tinto would welcome the opportunity to discuss the advantages and disadvantages of different alternatives to the current TEBA test and how they might be best applied to meet the policy objective of protecting trade-exposed industry and avoiding carbon leakage. These potentially include:

- a shift away from a revenue metric (for example to a Gross-value add metric);
- a focus on process emissions – for example a process emission test could be used in conjunction with a cost-based test where the facility regardless of the first test could qualify for 2% declining baseline if the industrial process emissions¹ make up >80-90% of the Scope 1 emissions,

Or shifting to

- a range of qualifying TEBA test levels to account for manufacturing activities that have high revenue with low margins, i.e. lowering the threshold and range down from 3%-8%.

¹ Industrial process emissions as defined by Chapter 4 of the National Greenhouse and Energy Reporting (Measurement) Determination, 2008.

Facility-specific emissions intensities - aluminium

Facility specific emissions intensity values for the activity of aluminium smelter were set at a time when there were six operating smelters in Australia. Smelting operation process stability is sensitive to power fluctuations and interruptions. Smelters have been fulfilling an increasingly important role in stabilising the Australian electricity market, which has the side effect of increasing cell instability and increasing the perfluorocarbon process emissions. Smelters help electricity grid reliability and can help buffer high impact events and restore grid stability quicker in fluctuation events, but this comes at the cost of higher process emissions which will directly translate to compliance costs under the Safeguard reform. The reduction in operating smelters (now four) in the activity grouping and the impact on the baseline of electricity instability means that the industry-average is no longer a true average of recent historical performance.

Rio Tinto is requesting a reset of the aluminium EI using recent historical data to recognise the change in baselines smelters have had due to the role of stabilising electricity grids.

Multi-year monitoring period

Many of the pathways to decarbonise in our business are technically complex and involve new technology and industrialisation that have not been tested at the scale of our operations. Large capital replacement programs and upgrades also take substantial capital investment and/or time, and careful installation planning and commissioning to reduce the impact on operations. Rio Tinto would also like to see consideration of being able to group several larger decarbonisation projects together at a facility to be valid for applying for eligibility under the MYMP. Having a single project able to qualify under the MYMP as proposed will be unlikely especially for above industry-average facilities with significant gaps to baseline.

The multi-year monitoring period should be flexible in activity qualification to allow for capital upgrades being installed to reduce Scope 1 emissions as well as new and emerging technology solutions. With capital projects, until the capital funding approval has been signed off, it is unreasonable for a declaration to be signed that the facility will absolutely implement the projects and be able to avoid an excess emissions situation. The qualification for MYMP should be based on an the facility's plan and intent to reduce emissions with a single or multiple phase implementation step-change to emissions. The commitments that an officer should be asked to make in a declaration should not be greater than the level of internal certainty and sign-off at the time the declaration is made. The level of certainty can be very different depending on the level of maturity and progress of a project through the capital process stages and how proven the solution currently is.

Depending on the level of development, five years is a tight timeframe for design to first industrialisation implementation of new technology solutions. We request that the maximum multi-year monitoring period be extended for longer duration periods.

If the solution has a longer lead time to implement, it should be allowed to partially cover the total excess emission in the final year of MYMP (rather than all of it for the full period). We request that the criteria be lessened from the requirement to avoid excess emissions in total at the end of the MYMP to be a requirement for the facility to reduce emissions below their baseline in the final year. This would still be desirable for facilities to enter into, as it does not affect the delivery of the emissions target, but allows the facility to be well placed in the first year after the MYMP to recover from the costs of the MYMP.

Transitioning facilities to substantially reduce Scope 1 emissions will require considerable financial investment in abatement by businesses in those facilities. Ways to recognise this spend and magnify

the reach of the co-investment by Government in abatement from the Powering the Regions fund (PRF) should be considered. One pathway to do this is to reduce the offset obligation within a MYMP. This would mean more business funds can be invested in developing decarbonisation pathways instead of purchasing offsets from the market.

Qualification for MYMP should be able to be on a large project delivery basis rather than quantity of abatement basis and acceptance for funding under the PRF should automatically qualify a facility to be eligible for an MYMP.

Safeguard Transformation Stream (STS)

Rio Tinto is supportive of preferential treatment for access to decarbonisation and new technology funding for trade-exposed facilities covered by the Safeguard Mechanism. The STS fund is small compared to the estimated collective decarbonisation investment the safeguard facilities are likely to need to reduce emissions collectively to 100 MT CO₂-e by 2030.

There have been a number of estimates of the likely investment required in the Australian economy to deliver net zero by 2050. McKinsey has for example estimated this to be approximately 1% of GDP per annum². Given Safeguard Mechanism facilities comprise 28% of Australia's emissions, even a proportional application of this cost will be ~0.3% of GDP per annum (likely to be higher given the presence of many hard-to-abate industries in the sector). The vast majority of this investment will be made by the private sector, but it is important for the Australian government to play an enabling role in accelerating these investments. Considering even the application of a 1:10 ratio of Government funding an STS/Powering the Regions Fund (PRF) of >0.03% of GDP per annum for at least a 10-year commitment (sufficient to align with business capital decision-making timelines) would help to drive the investments the Australian government seeks in Safeguard Mechanism facilities. Therefore, we suggest that the STS/PRF ought to be at least \$A600m/year, with unused balances carried forward to the following year with a 10-year sunset date, to incentivise businesses to invest rapidly

We would like to see an approach for the STS and the PRF to:

1. Award funding to existing Safeguard facilities that are above their GHG baseline or projected to go above their baseline in the period up to 2030
2. Award based on business key performance indicators (KPIs) (i.e., to a return-on-investment (ROI) or Net Present Value (NPV) financial framework). That is the funding required to make a project economic
3. Include associated infrastructure (e.g. electricity transmission)

If funding goes preferentially to lowest cost abatement, it would further impact on the ability of facilities with higher cost abatement and which are above their baseline to have a credible pathway to decarbonise. Rio Tinto would like to see priority funding for those facilities that have been paying larger compliance costs in the form of credits under the Safeguard Mechanism.

In-kind contributions are essential in all projects, and their development and operating and maintenance expenses can be as much as 30% of overall budget. Our view is that these should also be able to be counted towards an applicant's contribution to the PRF, as is the case with other existing project-based support programs such as those run by ARENA.

We also support STS/PRF funding being allocated to existing initiatives as these initiatives can have high potential to make a faster impact on emissions. These should include projects such as thermal and

² McKinsey "The net-zero transition: What it would cost, what it could bring", 2022

mechanical storage systems, mobility, and electricity supply and demand (essential for electrification projects).

Price capping mechanism

Rio Tinto is supportive of a price capping mechanism within the scheme that provides a limitation to the maximum cost per unit being borne by industry in the decarbonisation transition. This cost is on top of abatement investments.

Renewable electricity incentives

For most facilities, electrification is the dominant pathway to reducing Scope 1 emissions under the Safeguard Mechanism. Rio Tinto encourages the Government to continue to provide positive incentives and a streamlined approvals and connection pathway for renewable energy generation in Australia, in line with global competitors (e.g., China, USA, EU) and to invest in infrastructure to facilitate the increased supply of renewables to industry. Large industrial facilities will need access to renewables quickly and at low cost in order to implement capital solutions which will result in a net reduced emissions position when considering the total Scope 1 and 2 footprint of the facility. This is critical to securing the long-term competitiveness of Australian industrial assets.

Borrowing from future baseline

It is our view that when borrowing at only 10% of the future baseline the proposed 10% interest rate is set too high.

ACCUs

We welcome proposed recommendations by the Chubb review in relation to improving integrity, transparency and governance of ACCUs and the carbon crediting framework.

New facilities

Rio Tinto supports new facilities having emissions baselines lower than existing facilities, however the requirement to have an international best practice plus a 4.9% annual decline will be difficult for new facilities to achieve. Consideration should be given to setting baselines using recent Australian industry EIs as the basis for setting best practice for simplicity. These should be published, to give new investments certainty to investors on the baseline and cost implications.