

Australian Government  
Department of Climate Change, Energy, the Environment and Water

Submission via the Department's Consultation Hub

17 August 2023

## **RE: National Hydrogen Strategy Review consultation**

Rio Tinto welcomes the opportunity to make a submission to the Department of Climate Change, Energy, the Environment and Water ("the Department") regarding its National Hydrogen Strategy Review.

Rio Tinto acknowledges that we have an important role to play in the energy transition. We have committed to decarbonising our assets, particularly reducing our Scope 1&2 emissions to net zero by 2050. In 2022, Rio Tinto's emissions were 30.3 million tonnes CO<sub>2</sub>e of which around 60% were generated by our Australian assets, primarily our energy intensive Alumina and Aluminium assets in Eastern Australia.

The successful reduction of emissions in our Australian assets in large part relies on the availability of large-scale renewable energy, including green hydrogen. Without access to firm renewable power, it is challenging to justify significant long-term capital investments in energy-intensive Australian manufacturing facilities with low profit margins.

In July 2023, in partnership with the Australian Renewable Energy Agency (ARENA), Rio Tinto and Sumitomo agreed to build a hydrogen plant and retrofit process equipment at our Yarwun, Alumina refinery in Gladstone to demonstrate the viability of using hydrogen in the calcination process phase of Alumina production.

Gladstone has been positioned as a Green Hydrogen Hub by the Australian Government and a number of large-scale hydrogen facilities for domestic consumption and export are proposed. If hydrogen calcination technology is successful, then Rio Tinto's Gladstone alumina refineries have the potential to be large-scale domestic customers supporting development of a green hydrogen industry. The technical and commercial lessons from these trials could also lead to implementation of hydrogen calcination across the alumina industry globally.

To decarbonise the calcination process stage in the refineries with green hydrogen, we rely on continued support from the Federal Government to develop external infrastructure and markets near domestic industrial users. It will be important to continue to prioritise the Gladstone region as a hydrogen hub and provide associated Federal Government funding to develop green hydrogen projects here to ensure cost-competitive green energy for our alumina refineries and the broader industry. It is likely that separate funding for common user infrastructure (i.e. hydrogen storage and transmission pipelines) will be necessary for industry to take up the opportunity of decarbonising industrial processes with hydrogen.

Rio Tinto contributes to marine industry emissions through seaborne transportation of our products. There is an opportunity for Australia's National Hydrogen Strategy to support the reduction of maritime emissions, and growth in bunkering at Australian ports, by allocating supply of green hydrogen to the domestic production of green shipping fuels.

The National Hydrogen Strategy recognises that secure supply of renewable energy is critical to decarbonising Australian industry, as well as promoting investments in technology development and brownfield and greenfield projects. The Hydrogen Headstart program is a positive step, however, program funding will likely need to be increased by an order of magnitude and be quarantined to future-facing domestic industrial production to support rapid decarbonisation. Planning around access to, and pricing of, hydrogen should recognise the economic opportunities associated with decarbonising domestic industry and promoting value-add processing onshore. While the focus on positioning Australia as a hydrogen exporter is understood, it is important to recognise hydrogen is most effectively used where it is produced.

We encourage the Department to consider opportunities to accelerate the development of green hydrogen projects (including both hydrogen supply and development of technologies for hydrogen to displace fossil fuels) and to provide regulatory certainty to inform long-term planning and decision-making by industry. This would support industry to minimise potential barriers to the initial uptake of hydrogen, including the timelines and cost associated with: technology development and deployment, modifying or replacing plant and machinery, and coordinating significant change across complex value chains.

We thank the Department for the opportunity to engage on the review of the National Hydrogen Strategy, which is important to maintaining competitive manufacturing and mining industries in Australia as it progresses its energy transition. We look forward to continuing to work together with government and energy suppliers to create a competitive, renewable energy system for Australia.

We would welcome the opportunity to discuss this submission with you further. In the interim, if you have any questions, please contact Rachel Storrs ([Rachel.storrs@riotinto.com](mailto:Rachel.storrs@riotinto.com)).

Yours sincerely,



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