How Investments in Critical Mineral Capacity Could Make Australia a 'Renewable Superpower'

Treasurer Jim Chalmers unveiled the Government's first major budget on Tuesday evening and claimed it kick-starts Australia's journey to 'renewable superpower' status, the main components of which were significant investments into hydrogen power and the transformation of the energy industry. The commitments spawned a myriad of articles from the nation's foremost media institutions discussing the two investments, and how they will lead Australia's transition into a global renewable superpower. However, what they often overlooked was the government's investment into Australia's secret weapon: critical mineral capacity

Hydrogen Power

The Budget rightly identifies hydrogen as a critical enabler for future 'green manufacturing'. The Government is investing $2bn in revenue support to large-scale hydrogen projects, putting Australia on the path to realising a gigawatt of electrolyser capacity by 2030. In addition to powering the grid alongside wind and solar, the Renewable Energy Agency claims that Australia will be able to generate $10bn by exporting over 3mn tonnes of hydrogen. Putting this in perspective, the top exporter of hydrogen, China, raised only $2.73bn from its exports in 2021.

Industry Transformation

A further $1.3bn will be invested to decarbonise, modernise and grow Australia's industrial capabilities and build the human capital that is necessary to realise the country's renewable potential. The funding will be used to develop the facilities, skills and experience required to deliver the transition. This is further strengthened by the *National Net Zero Authority* legislation that aims to support workers in emissions-intensive sectors to access new training and employment in the renewable sector. $400mn of this $1.3bn will be used to establish the Critical Inputs to Clean Energy Industries Stream to support the sovereign manufacturing capability of industries in the country's regions that produce inputs (primary steel production, cement and lime, alumina and aluminium) that are critical to the renewable transition. These investments in addition to those made in critical mineral capacity will help Australia position itself as a renewable superpower for decades to come.

Critical Mineral Capacity

The government is investing $57.1 million in a new program to develop strategic and commercial partnerships with other countries to secure a diverse and resilient supply of critical minerals. This builds on the existing $2 billion Critical Minerals Facility and the $15 billion National Reconstruction Fund, which includes $1 billion for investments in value-adding resources, such as processing minerals. The government is also investing up to $3.0 billion in renewables and low emissions technologies, including green metals, under the National Reconstruction Fund.

The global push for trade and investment changes has led to an increased demand for critical minerals, providing Australian firms with opportunities to improve their value chain position. Australia's vast reserves of minerals such as lithium, cobalt, rare earth metals, and nickel are crucial for decarbonizing the global economy. Australia is the largest lithium producer, the

third-largest cobalt producer, and the fourth-largest rare earth metal producer globally, with nearly a quarter of the world's nickel resources. The demand for lithium and nickel is expected to grow 40 times between 2020-2040. Additionally, Australia has a comparative advantage in renewable energy generation. Meeting the demand for low-emission products is crucial in helping international partners achieve their emission targets.

Hydrogen power and industry transformation are critical components of the renewable transition, and the government's investments in them are receiving the praise they merit. However, by investing in and leveraging its vast mineral reserves, Australia is well-positioned to lead the global transition to a low-carbon future and take its place as a renewable energy superpower.