critical minerals

Queensland Critical Minerals Strategy

Rich in resources, ready for tomorrow





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The Department of Resources acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land, sea and community, and recognises their continuing contribution towards creating this strong and prosperous state of Queensland. We pay our respects to Elders past, present and emerging, and acknowledge those of the stolen generation who are still finding their way home.

The Country is sacred. Everything on the land has meaning and all people are one with it. We acknowledge First Nations peoples' sacred connection as central to culture and being.

We acknowledge the stories, traditions and living cultures of First Nations peoples and commit to shaping our state's future together. We recognise the contribution of First Nations peoples and communities to the State of Queensland and how this continues to enrich our society more broadly.

A message from the Premier

The Queensland Critical Minerals Strategy has been developed to unlock the next resources boom in critical minerals.

It is a strategy supported by our Queensland Energy and Jobs Plan to build the \$5 billion CopperString 2032 transmission line, the largest economic development project in northern Australia to connect the North West Minerals Province with the largest renewable energy zone on the east coast of Australia.

Queensland's critical minerals will be needed to build the wind and solar farms and batteries to deliver on our plan for 70 per cent renewable energy by 2032.

The strategy includes \$245 million of initiatives to move faster and smarter, maximise investment, build value chains, and foster research and ESG excellence.

Queensland is already a global resources powerhouse and the Critical Minerals Strategy will position Queensland for the future to mine and process the minerals and manufacture the renewable technologies needed for the clean energy industrial revolution. That means more good, secure jobs across regional Queensland.

It is a plan for collaboration and partnerships across industry, academia, community and First Nations peoples. By working together Queensland's best days truly remain ahead of us.

ANNASTACIA PALASZCZUK MP
PREMIER OF QUEENSLAND
MINISTER FOR THE OLYMPIC AND PARALYMPIC GAMES





Minister's foreword

The global embrace of sustainability, of concern for human-induced impacts on the atmosphere and biosphere that sustain us, is driving demand for transition of our energy systems to cleaner sources.

Queensland stands at these crossroads with a wonderful opportunity to meet these challenges and take the lead. Queensland can create a resources future based not only on what we have, but also on how we go about the business of putting our endowment of minerals to best use.

The Queensland Critical Minerals Strategy is about Queensland rising to the occasion—it will assist the world in this economic and energy transition and grasp the opportunities offered in a changing world.

In order to build the wind turbines, solar panels and storage batteries that are needed to decarbonise, Queensland will need critical minerals like copper, vanadium and tungsten. The global demand for these minerals is expected to rise exponentially over the next decade.

Here in Queensland, we have the mineral riches and resources that will carry us into a new century. But we do not just want to mine these resources. We will use them to manufacture the renewable energy technologies to power the world.

The strategy is about future proofing the next generation of jobs for Queensland, diversifying and decarbonising our economy, and ensuring Queensland's future sustainable economic prosperity.

Quite simply, if we do not manufacture our future, someone else will.

It is about acting now, with industry, community and First Nations peoples, to secure our future.

It is a broad and bold ambition, which is why the strategy embraces the long-term 30-year vision of the Queensland Resources Industry Development Plan (QRIDP) with new targeted objectives and actions to focus on the minerals critical to our collective future. It complements the Queensland Energy and Jobs Plan's vision of transitioning the state to a renewable energy future.

SCOTT STEWART MP
MINISTER FOR RESOURCES

Introduction

Critical minerals are the next chapter in Queensland's resources story.

Critical minerals form the foundation for all modern technology and security: in manufacturing, defence, electronics and more. Importantly, they also underpin the technologies required to achieve a global economic and energy transition—from electric vehicles to energy-efficient lighting and appliances, and smart buildings.

Put simply, the new economy starts and ends with critical minerals.

Queensland is rich in critical minerals.

Queensland has 51 of the world's most sought-after minerals. Some critical minerals, such as copper, zinc and aluminium, have been mined in Queensland for decades—others, such as vanadium, are about to be mined for the first time.

For Queensland to capitalise on the generational opportunity the demand for our critical minerals represents, we must take quick and purposeful action.

The Queensland Critical Minerals Strategy outlines four objectives to ensure Queensland can seize this opportunity. The result will benefit customers, stakeholders and the environment, ultimately positioning Queensland's resources industry for sustainable, long-term growth.

Building on our foundations

The Queensland Critical Minerals Strategy builds on the Queensland Resources Industry Development Plan (QRIDP). The QRIDP provides a 30-year roadmap to ensure Queensland's resources industry continues to create jobs and prosperity for generations to come, and brings clear focus to the development of a critical minerals sector.

The strategy also aligns with other key Queensland plans to provide an integrated framework for new industries to be developed, sustainable economic growth, and to align the state's efforts to respond to climate change and decarbonising the economy.









STATE INFRASTRUCTURE STRATEGY 2022 QUEENSLAND'S ZERO EMISSION VEHICLE STRATEGY 2022-32 QUEENSLAND'S FUTURE ECONOMY – DRIVING CLIMATE ACTION 2020–30

STATEMENT OF COMMITMENT: PATH TO TREATY LOCAL THRIVING COMMUNITIES ACTION PLAN

QUEENSLAND WORKFORCE STRATEGY 2022-32

Today's strengths, tomorrow's opportunities

Global drivers

Global demand for critical minerals is predicted to rise significantly.

The International Energy Agency estimates that demand for minerals is expected to quadruple by 2040 to ensure the world can build the clean energy technologies needed to reach the goals of the Paris Agreement.

Locally, the Australian Government will reduce greenhouse gas emissions by 43 per cent by 2030 and both the Australian and Queensland governments have committed to net zero emissions by 2050. Queensland has also committed to a renewable energy target of 80 per cent by 2035.

This means both domestic and global commitments cannot be achieved without significant and accelerated growth in the supply, processing, refining and manufacturing of critical minerals.

For Queensland, this presents opportunities not only to supply the critical minerals needed to make the equipment, but also to have local processing and advanced manufacturing industries—creating a prosperous pit-to-product, onshore critical minerals sector.

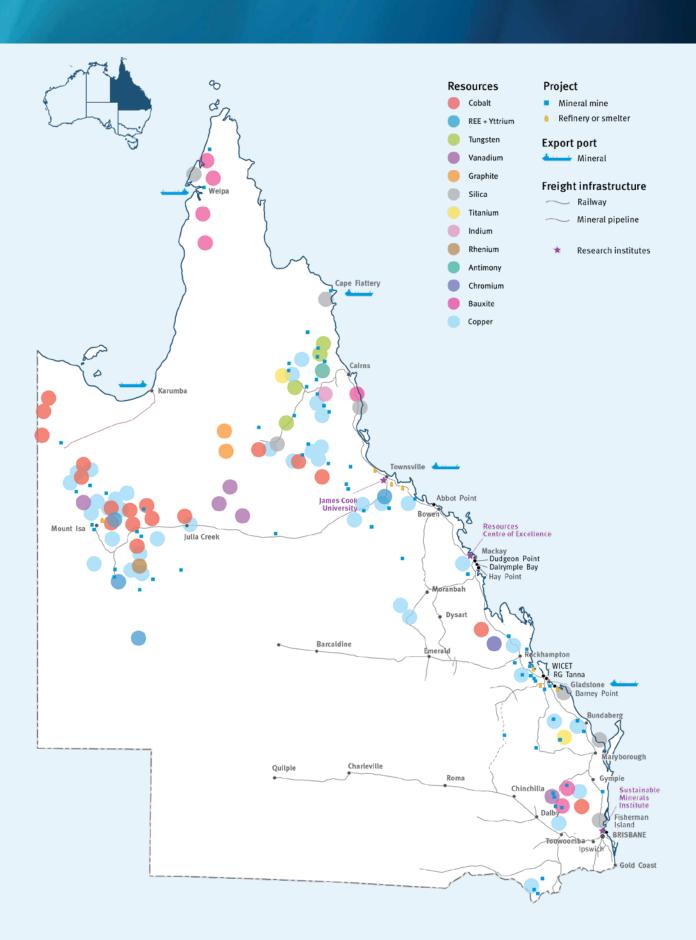
Queensland's critical minerals opportunity

Queensland has some of the world's richest mineralproducing areas, with major deposits of copper, lead, zinc, nickel, cobalt, tungsten, graphite, vanadium and silica, as well as silver, phosphate and rare earths. There is also further resource potential across a range of other minerals—especially in the world-renowned North West Minerals Province.

This abundance of supply means Queensland has many existing and emerging critical minerals projects.

Queensland is host to large and long-lived coppermining activities, with new deposits still being discovered, and developments still being successfully progressed. There are emerging suppliers in vanadium, and new projects for cobalt are being explored, with significant potential from existing and abandoned mine-site tailings. High-purity alumina projects in Queensland are also showing early success and companies are ready for new partners. Deposits of rare-earth elements are found in multiple sites across Queensland, including in by-product sources such as mine tailings and bauxite residue.

Queensland's critical minerals sector also comes with strong environmental, social and governance (ESG) foundations and a commitment to source and manufacture minerals sustainably and responsibly. There is also a network of existing infrastructure—with more under construction—a skilled and experienced workforce, a robust and supportive regulatory framework, and established research and development capabilities.



Queensland's ambition

To transform the state, national and global economy through the responsible use of Queensland's critical minerals, creating sustainable economic prosperity for Queensland.



Queensland will seize this generational opportunity by accelerating the downstream value chain, growing more value-adding processing and manufacturing industries, built using local critical minerals.

Key to achieving this ambition is genuine collaboration and partnerships with the Queensland resources industry, academia, resource communities, First Nations peoples, and local, state and federal governments.

By taking quick and purposeful action, Queensland will secure long-term economic prosperity, create more good, secure jobs in regions and provide a pathway for orderly transition away from the carbonintensive elements of the economy.

The Queensland Critical Minerals Strategy is a simple, certain and sophisticated path forward to manufacture our future.



Actions for a critical minerals sector

The Queensland Critical Minerals Strategy outlines four key objectives, as well as new and existing actions, that will achieve Queensland's ambition for a prosperous critical minerals sector.

The four key objectives:



Move faster, smarter



Maximise investment



Build value chains



Foster research and environmental, social and governance (ESG) excellence

Weipa Port Terminal, North Queensland Bulk Ports





Industry-enabling action

Accelerating the development of a critical minerals sector and the downstream value chain requires a new approach by the Queensland Government that reduces complexity and provides a positive environment and customer experience for investment.

The delivery of this strategy will be driven by a Critical Minerals Office.

Action:

The Critical Minerals Office

A dedicated office (Critical Minerals Queensland) will be established as a centralised point for industry, investors and community, and will bring dedicated focus to the Queensland Government's ambition to grow the sector. Critical Minerals Queensland will be responsible for:

- leading government action in the sector
- providing a centralised point of contact for potential investors, new proponents and relevant stakeholders
- coordinating pre-lodgement meetings with relevant stakeholders and government

- agencies (for projects outside the Coordinator-General's remit)
- marketing Queensland internationally and working with the Australian Government to leverage bilateral free trade agreements and international finance in conjunction with Trade and Investment Queensland
- facilitating industry and government investment in research and development.





Objective 1:

Move faster, smarter

Critical minerals mining is a complex and timeconsuming process involving major decisions by both proponents and government entities. From exploration and feasibility studies to securing permits and licences, each step requires careful evaluation through planning and collaboration to ensure responsible mining practices throughout the critical minerals value chain.

Recognising the potential economic and geopolitical benefits, Queensland will prioritise the exploration and extraction of its mineral resources, while fostering domestic innovation, investment, and sustainable practices. Queensland can position itself as a significant contributor to the global critical minerals value chain and enhance its economic resilience and influence on the world stage.

The Queensland Government is committed to developing a critical minerals sector that moves quickly to take advantage of opportunities that benefit the sector and Queenslanders. Importantly, moving faster and smarter will not alter our commitment to protecting the environment, communities and the cultural heritage of First Nations people.

We can accelerate the pace of development in the sector to ensure reliable mineral supply and meet the evolving needs of the world through:

- a targeted approach and streamlining government processes
- maximising the potential of existing and abandoned mines
- fostering partnerships and collaborations among industry stakeholders, government bodies and research universities
- investing in key infrastructure and further exploration.



Existing commitments to enable Queensland to move faster, smarter

- Queensland's Collaborative Exploration Initiative (QRIDP action 2) provides \$22.6 million investment to support Queensland's minerals exploration industry.
- Undertaking a re-commercialising abandoned mine pilot program (QRIDP action 7) to recommercialise the area that includes the former Wolfram Camp mine, Bamford Hill mine, and surrounding exploration areas.
- The Queensland Government has committed **\$75 million** for the Queensland Resources Common User Facility (2022–23 Budget Update), which will be developed at the Cleveland Bay Industrial Park in Townsville to trial production processes for commercialisation, enabling prospective miners to begin producing mineral samples at scale.

Industry enablers

- Queensland's critical minerals sector will be enabled by the Queensland Government's \$5 billion investment to own and deliver the 1100km CopperString 2032 project (2023 announcement).
- Identify options to secure sulphuric acid supply for mines, mineral processing and fertiliser manufacturing (Action 1.3 of NWQ Economic Diversification Strategy Implementation Plan to 2025).
- The Queensland Government is developing a Queensland resources industry workforce plan (QRIDP action 33) and supporting the training needs of existing and future workers by investing over **\$3 million** into the Queensland Future Skills Partnership (QRIDP action 35).

Action:

Critical Minerals Zones

Funding: \$75 million

A place-based approach will be undertaken where projects are co-located in one regional area. This approach will leverage collaboration opportunities to achieve time, resource and capital efficiencies. Each zone will be unique, and government actions will be tailored according to geography, stakeholder priority and concerns, and the minerals targeted. The benefits of zones may include:

- government, industry and community working groups to identify common issues and advance collaborative solutions
- regional environmental and social impact baseline assessments to provide robust and transparent data and information for use by all stakeholders
- coordinated assessment and development of critical minerals projects
- coordinated development of enabling and common-user infrastructure to realise economies of scale and scope
- opportunities to make use of mineralisation in mining wastes, ensuring responsible use of resources
- coordinated community consultation to understand local community needs and create opportunities for larger positive communitylegacy projects to be delivered
- partnerships with communities and First Nations peoples to understand their aspirations and support Native Title and cultural heritage.

The Queensland Government will work with community, First Nations peoples and industry to commence a coordinated approach in Julia Creek / Richmond, focusing on vanadium; and Mount Isa, focusing on secondary prospectivity in mine waste.

Consultation will be undertaken to investigate this approach at other locations, including Cape Flattery, focusing on silica. Establishing future zones will be in line with the aspirations of First Nations peoples, and other commitments from the government including future world heritage listings.

Baseline studies for the critical mineral zones may also inform a bioregional plan under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.* The intent of bioregional plans is to provide improved protection of important areas of biodiversity while providing greater certainty about where development can and cannot go, and identify areas where further consideration of environmental values is required. Bioregional planning may support streamlined approval processes by removing duplicate assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) when a development proposal is consistent with a bioregional plan.

Action:

Explore remaining mineralisation in mine waste

Funding: \$5 million

Queensland has significant mine tailings and waste rock which hold substantial mineral deposits and value. A barrier to commercialise minewaste opportunities is establishing the grade of mineralisation that remains in-ground.

The Queensland Government will provide \$5 million in funding as part of the Collaborative Exploration Initiative to assist companies to undertake drilling within tailings and waste-rock dumps on abandoned and operating mines sites.

Action:

Facilitate secondary prospectivity for critical minerals

The right regulatory framework to enable secondary prospectivity of minerals is required to ensure the responsible use of Queensland's critical minerals, and to realise the full potential on previously disturbed land.

The Queensland Government will review the regulatory framework to facilitate reprocessing opportunities, including consideration of a new 'Residual Mineral Recovery Tenure' and investigation into the current risk assessment criteria used to determine risk allocation in the Financial Provisioning Scheme.



Wolfram Camp tailings dam



Objective 2: **Maximise investment**

Investors actively seek a positive investment environment that offers certainty and fosters growth, particularly in the context of critical minerals where projects are long-term investments with significant capital expenditure prior to any incoming revenue.

The Queensland Government must establish the appropriate market, regulatory and workforce settings to effectively attract investment. A clear value proposition that demonstrates the advantage of investing in Queensland's critical minerals sector and associated value chains is required to effectively attract, retain and provide confidence to investors.

The opportunity for Queensland is to become a premier investment destination renowned for critical minerals, with growing mining, processing and advanced manufacturing industries.

Active promotion of Queensland through marketing campaigns will be key to pitch Queensland as a highly attractive destination for investment in critical minerals and raise the profile of the state internationally. The Queensland Government will capture our state's potential by highlighting Queensland's unique strengths, including our mineral resources, investment climate and skilled workforce, to attract investors.

Existing commitments to maximise investment

In late 2022, the Queensland Government deferred rental payments on mining leases for new critical minerals projects for one year. This improves a company's chance of success by being able to redirect funds towards their project (QRIDP action 10).

The Queensland Government is also investing **\$5 million** in geoscience research on existing copper, cobalt, rare earth, indium and other critical mineral deposits to better understand their occurrence and distribution. This will better define our critical mineral potential and provide the resources sector with the tools they need to overcome challenges and develop new techniques to aid exploration, discovery and extraction of minerals (QRIDP action 4).

Action:

Rent reduction for exploration

Approximately \$55 million in forgone revenue

Exploration is critical to building a critical minerals value chain in Queensland. An immediate priority for Queensland is to encourage more exploration to support new mineral discoveries.

The Queensland Government will reduce the rent for new and existing exploration permits for minerals to \$0 for five years (approximately \$55 million of forgone revenue).

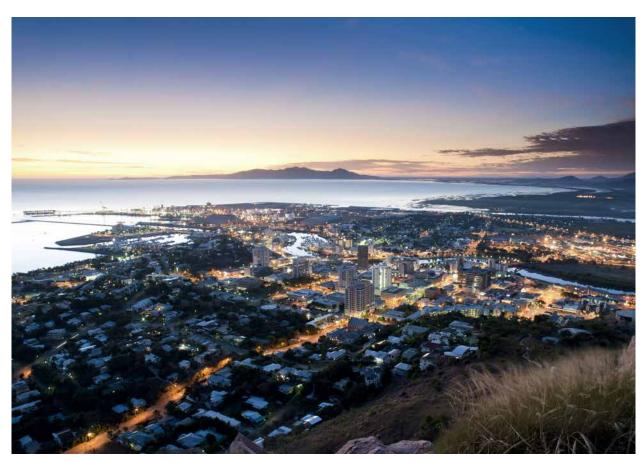
Action:

Profile and promote Queensland

Funding: \$1 million

Attracting international investment and leveraging bilateral agreements will be necessary to position Queensland as a key global supplier of critical minerals. The Queensland Government will work closely with the Australian Government under a 'Team Australia' brand, while profiling Queensland's unique competitive advantages.

An interactive, investor-focused portal will be developed to provide a positive customer experience and access to high-quality and up-to-date information about Queensland's critical mineral opportunity, projects and other market intelligence. Investment information, including Queensland's Critical Minerals Prospectus, will be updated and a comprehensive promotion strategy will be developed.



Townsville, Queensland



Objective 3:

Build value chains

Attracting and securing investment in the value chain beyond extraction is important in providing greater and lasting benefits to Queensland. Historically, Queensland has used its resource endowment to export raw materials to other countries where processing and manufacturing are more prevalent and well established.

The commitment in the Queensland Energy and Jobs Plan (QEJP) to rapidly increase our renewable energy technology and battery storage presents an opportunity to develop supply chains with urgency and surety of local demand.

Queensland's well-regulated, sustainable and highly skilled economy coupled with high safety standards and wages, may have been a barrier to building on our value chains in the past; however, increasing demand from consumers and investors to invest in and purchase products from companies with strong ESG credentials is changing the sector.

Queensland can enhance its export potential and explore new markets for its goods and services by embracing and investing in value-adding industries. This will diversify the Queensland economy, boost competitiveness, foster economic growth and generate new business opportunities across the state. The Queensland Government's focus on building onshore processing and manufacturing capabilities will also create high-quality jobs across a broad a range of skills and expertise, providing key opportunities as the state transitions into the new economy.

Collaborative efforts between the government, industry, research institutions and communities are crucial in creating a well-integrated and sustainable value chain. Prioritising value-chain development can assist Queensland to secure a reliable flow of critical minerals, attract investment, maximise economic benefits and position itself as a leader in critical minerals.

The Queensland Government is committed to building value chains to get the most benefit from our natural resources for Queenslanders.

Existing commitments to build value chains

The Queensland Government is investing **\$5 million** to develop the Queensland Battery Industry Strategy to outline actions to seize the opportunities that this supply chain offers and integrate Queensland's efforts with work being done nationally (QRIDP action 9).

The Government has committed **\$500 million** for government-backed grid-scale and community batteries (QEJP action 1.3). This will allow Queensland's publicly owned energy businesses to invest in battery projects across the state that maximise local content.

\$11.6 million has been committed to build capacity in manufacturing to grow the renewable energy supply chain (QEJP action 3.4).



Action:

Deliver the Critical Minerals and Battery Technology Fund

Funding: \$100 million

The Queensland Government seeks to support businesses across the whole critical minerals supply chain, with a focus on enhancing the extraction and processing of critical minerals, and accelerating the development of battery technologies and production of precursor or advanced materials in Queensland. This is important to provide new, secure jobs and get the most value out of our natural resources for Queenslanders.

The Queensland Government, with the Queensland Investment Corporation, will deliver the previously announced \$100 million Queensland Critical Minerals and Battery Technology Fund to accelerate the pit-to-product supply chain and meet the growing demand for clean energy technologies. The Fund will provide support for local businesses and industry-led consortia to build industry capability in Queensland, providing greater access to national and global supply chains in metal refining, mineral processing and battery technology.

Objective 4:

Foster research and ESG excellence

Investor interest in companies demonstrating strong environmental, social and governance (ESG) practices continues to grow as ESG increasingly factors into investment decision-making. Jurisdictions around the world including the European Union, the United States of America and Canada are actively considering or have introduced regulations related to ESG reporting including scope 1, 2 and 3 greenhouse gas emissions, circular economy, pollution, biodiversity, diversity and inclusion, and supply chain management.

Queensland's resources industry has always operated within systems and laws that are designed to recognise our state's unique natural qualities, heritage, communities and the needs of industries. As a result, Queensland's resources industry has a strong economic and community legacy. These robust regulatory frameworks provide a solid foundation for resources companies to establish strong corporate and social governance practices, which can be used to demonstrate their own ESG credentials.

Industry has an important role in ensuring high ESG standards are met for activities in Queensland. The Queensland Government expects proponents to engage early with communities and First Nations peoples, to protect cultural values, minimise impacts on the environment and leave a positive benefit for communities.

Objective 4: continued

While critical minerals will help decarbonise the world's economy through electrification, proponents are also expected to demonstrate that their operations will help achieve Queensland's decarbonisation ambitions and contribute to meeting climate targets at state and federal levels.

The Queensland Government will work with industry to help businesses align with evolving global standards to meet the expectations of international markets and governments.

Queensland can further enhance its position in the critical minerals value chain by increasing investment in research and development and new innovative products and techniques.

The Queensland Government will partner with industry, universities and research organisations to help businesses reduce costs and maximise production values, while minimising the footprint of the sector. These factors will be crucial to realising ESG outcomes and will give Queensland a competitive edge among its global competitors.

Action:

Partner with industry to build ESG excellence

Funding: \$1 million

The Queensland Government will work with industry to improve their ESG performance and reporting to ensure best practice and the ability to meet anticipated future requirements from consumers, investors, local communities and First Nations peoples.

The Queensland Government will also partner with industry to develop an ESG network to develop initiatives, which may include:

- events aimed at upskilling and equipping mining companies to better demonstrate ESG credentials
- presenting an annual ESG Excellence in Mining award
- collaborating and sharing research and methods that improve ESG practices.

Action:

Research and development in circular economy and mining

Funding: \$8 million

The Queensland Government will undertake research and development in circular economy and mineral discovery, extraction, processing and recycling, and develop a research institute—government minerals alliance. This action will also explore opportunities to realise greater efficiencies in the critical minerals value chain.

The Queensland Government will also investigate establishing a collaborative model between the Sustainable Minerals Institute (University of

Queensland) and other research institutions to focus on critical minerals. This model could support existing programs in the critical minerals sector including current international collaborative work with Japan, Korea, the United States of America, Canada and Finland. The model would also be beneficial to support policy development and embed circular economy thinking.

Summary of actions

Ambition:

To transform the state, national and global economy through the responsible use of Queensland's critical minerals, creating sustainable economic prosperity for Queensland.



The Critical Minerals Office

A dedicated office will be established as a centralised point for industry, investors and community to market Queensland internationally, facilitate investment in research and development, and lead government action in the sector.



Move faster, smarter

Critical Minerals Zones

A place-based approach will be undertaken to leverage collaboration opportunities and deliver time, resource, and capital efficiencies. Government action will be tailored to each zone and may include environmental and social impact baseline assessments, facilitation of enabling and common-user infrastructure, coordinated community consultation and partnerships with First Nations peoples.

· Explore remaining mineralisation in mine waste

The Collaborative Exploration Initiative will be expanded to include a dedicated program assisting companies to undertake drilling within mine waste on abandoned and operating mine sites.

• Facilitate secondary prospectivity for critical minerals

The regulatory framework will be reviewed to facilitate reprocessing opportunities, including consideration of a new 'Residual Mineral Recovery Tenure', and investigation of the current risk assessment criteria in the Financial Provisioning Scheme.



Maximise investment

· Rent reduction for exploration permits

No rent for new and existing exploration permits for minerals for five years.

Profile and promote Queensland

An interactive, customer and investor-focused portal will be developed to showcase investment opportunities in Queensland. This will include the development of a promotion strategy.



Build value chains

Deliver the Critical Minerals and Battery Technology Fund

The fund (announced in December 2022) will support local businesses and industry-led consortia to build industry capability in Queensland, providing greater access to national and global supply chains in metal refining, mineral processing and battery technologies.



Foster research and environmental, social and governance (ESG) excellence

Partner with industry to build ESG excellence

Tailored initiatives to enhance ESG capability will be delivered, including establishment of an ESG industry network in partnership with industry.

Research and development in circular economy and mining

Research and development in circular economy, recycling and mineral discovery, extraction and processing will be advanced, and a research institute—government minerals alliance developed.

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Contact us

criticalminerals@resources.qld.gov.au 13QGOV

