

To: Department for Energy and Mining (DEM)

Re: Draft Critical Minerals Strategy

27 October 2023

Introduction

AMEC appreciates the opportunity to provide a submission to the Department for Energy and Mining (DEM), on the State's draft Critical Minerals Strategy. AMEC has long-advocated for the development of such a strategy, to effectively guide the ongoing development and growth of South Australia's burgeoning critical minerals sector. We welcome continued engagement.

About AMEC

The Association of Mining and Exploration Companies (AMEC) is a national industry association representing over 560 member companies across Australia, with over 37 member companies with direct project interests in South Australia. Our members are mineral explorers, emerging miners, producers, and a wide range of businesses working in and for the industry. Collectively, AMEC's member companies account for over \$100 billion of the mineral exploration and mining sector's capital value.

Mineral exploration and mining make a critical contribution to Australia's economy, directly employing over 274,000 people. In 2021/22 Industry generated a record high \$413 billion in resources exports, invested \$3.86 billion in exploration expenditure to discover the mines of the future, and collectively paid over \$63 billion in royalties and taxes.

In South Australia in 2021-2022(FY) mineral exploration expenditure was at an 8-year high at \$122.3 million, a 34% increase from the previous year, and \$2.5 billion was spent on capital expenditure. In 2020-21, over \$237 million was generated in royalties from the \$7.1 billion in mineral commodity sales, representing a record high.

Draft Critical Minerals Strategy

General Comments

AMEC has consistently led calls for a South-Australia specific critical minerals strategy, to capitalise on the opportunities the state's diverse mineral resources offer, and the downstream processing capabilities it can support. We welcome through this draft Strategy, the publication of specific funding mechanisms to unlock untapped critical minerals potential across the State. These must be delivered within realistic timeframes, alongside opportunities to facilitate more timely and robust approvals functions.

The collaboration between industry and Government will be fundamental to achieving the objectives of the Strategy, and building a resilient critical minerals sector for the state. With a refreshed Australian critical minerals strategy released by the Commonwealth in mid-2023, including an additional \$4B in funding to support the development of the sector, each Australian State and

Territory is vying for competitive access to investment into their mineral assets and processing capabilities. There is a strong need for South Australian Government and Commonwealth collaboration, to enable South Australian companies to capture a fair share of funding available under Commonwealth financing arrangements, as well as international sources, including but not limited to the US' \$369B Inflation Reduction Act, and the EU's Critical Raw Materials opportunities.

AMEC welcomes continued engagement with the South Australian and Commonwealth Governments, to ensure South Australia's minerals sector is well-represented and can strategically capture and create long-term, wide-ranging benefits for the State, now and into the future. This strategy is an important step in the journey, but there is much to be done, to ensure favourable conditions can be capitalised on.

Format

It is unclear why there is an introduction on page 17 of a 51-page document according to the contents page, but 48 as per the draft PDF. An introduction on page 17 more appropriately represents an interlude rather than an introduction. Additionally, the 'purpose' of the document 18 pages in, is lost on readers who may have made it that far. The reason this document exists, the outcomes it seeks to deliver, and the actions that will enable the objectives of the strategy to be measured and ultimately met, should be clearly defined, and outlined on an extractable page, early in the document. The alignment between the State strategy and Commonwealth strategy, will also need to be clearly outlined, along with the definition the state chooses to use for the critical minerals it has listed as critical to the state.

There is a concerning limited use of the 'mining' throughout this document. Given it is a strategy about minerals, mining will be required. Government can play a role in ensuring multiple land uses are supported, facilitated, and community education and acceptance is encouraged. Utilising appropriate terminology is a simple step. Whilst the role of downstream processing can attract further investment and innovation to the sector, it is contingent on first discovering, and cost-effectively extracting those materials from the ground, to then consider secondary processing potential. More detail on the leading role Government can play to boost South Australia's minerals sector in its entirety, is welcome.

Whilst a message of support from the Premier is acknowledged, the absence of any message from the Minister for Mining at the time of publication is questioned. This notable absence is disappointing, as the Minister has an important role as the ultimate regulator and promoter of the State's mining interests. An endorsement of the state's minerals industry and this strategy from the Minister, is recommended.

Actions should be specific, measurable, achievable, realistic, and time-measurable (SMART). Without a means of tracking progress, it will be difficult to ascertain if the strategy has been successful or not. The strategy should also be subject to review in 3 years, to inform refinement or reallocation of funds to better suit the state's minerals pursuits.

South Australia's actual minerals potential and capacity

AMEC recommends this strategy clearly, realistically outlines the current, short-term and long-term potential of South Australia's critical minerals sector, and how the actions outlined within the strategy will deliver the wide-ranging benefits that are sought. In order to do so, market realities must be more closely aligned with ambitious statements throughout the document, and the Government's actual and perceived capacity to influence growth, must be carefully portrayed.

Page 8 for example, refers to grid-scale battery storage and emissions reduction infrastructure from critical minerals elements, but does not refer to battery usage for critical minerals. Given the majority of critical minerals explorers and emerging producers across South Australia and Australia more broadly are seeking to attract investment to explore vertical integration and a domestic battery industry, as per the Commonwealth's 'Australia Made Battery Plan', this draft Strategy would benefit from ensuring the terminology used, and growth aspirations, align with the targets and uses of South Australian minerals. Further, AMEC welcomes an update of the DEM website, with a list of critical minerals under the 'mineral commodities' section.

Objective 1 – Expand South Australia's critical minerals processing

Action 1 – Critical Minerals Development Fund

AMEC recommends that further detail, including the dollar value that will be allocated to the proposed Critical Minerals Development Fund, is consulted on and released, with this Strategy. The absence of specific monetary value, timeframes or measurable details, renders this strategy and its effectiveness, difficult to monitor.

Industry would welcome a Fund, comprised of competitive grant money similar to the Accelerated Discovery Initiative (ADI) for all minerals be introduced as a fixed line item to South Australia's Budget, but this Fund should be specific to critical minerals, whereas the ADI remains open to all mineral commodities.

It should be clearly outlined who will manage this Fund, if it will be comprised of one pool of money for a fixed period of time or instead have rounds of funding, the governance and eligibility criteria, if it is intended to attract new processing capacity to the State or ramp up existing capacity, and interaction with other funding mechanisms available in the state. These incentives would benefit from being highlighted by the Department for Trade and Investment (DTI, SA), Austrade, and Commonwealth Critical Minerals Office (CMO) to showcase to the world, the support the State has for its minerals sector.

Action 2 – Critical minerals processing hub(s)

The proposed establishment of critical minerals hubs to provide common user infrastructure for critical mineral processing will be reliant on a large co-investment from Government (State and Commonwealth), with Industry input. Locating the infrastructure or hub in a prime location to advance development, with appropriate clearances and approvals (EPBC), as well as supporting infrastructure for transport and utilities such as affordable power and water, will be a significant undertaking. AMEC welcomes further detail on the role the State, Industry, and the Commonwealth are envisaged to play.

We support exploring options for processing minerals domestically, and have previously advocated for the establishment of a Government-led common user facility, to support demonstration-size

quantities of South Australian critical minerals being processed domestically, for offtake and joint venture assurance. This proposal was supported by the Queensland Government, with their Critical Minerals Common User Facility. The detail of where such a facility would be located in South Australia, the cost, financing models, project management, third-party access arrangements, insurance, IP policies, and clearances to establish such a facility, are details this Strategy should outline or in the very least consider, for it to be effective and deliver value within this limited timeframe.

Site selection will be critical to ensuring these approvals steps are undertaken in an effective and efficient manner. Consideration must be given to contamination of land at the listed locations in the draft strategy, and the substantial burden that would be borne by potential proponents should there not be suitable Government support in obtaining these necessary permits.

The fund and hubs model is supported, but would need an estimated minimum of \$50M to support the clearance and 'land works' process of one hub, before the common user aspect is even considered. A common user facility and infrastructure must be holistically consulted on, with existing and developing potential proponents, including current minerals proponents who do not solely have critical minerals projects, to ensure the fund serves the greatest benefit to the State, and can continue to unlock value into the future.

The majority of companies will face challenges in sourcing and securing cost-effective utilities off the grid, and these cost constraints will constrict project viability. Government can de-risk this process by facilitating the development of a strategic industrial estate, to support the idea of hubs. The estate should have sufficient transport connectivity to points of egress, and Aboriginal heritage surveys and agreements, to ensure the land is 'plug and play' ready.

The State has essentially selected a number of projects and companies that are at advanced stages, and listed them in this document. In doing so, a range of other companies and projects have not been listed or acknowledged. The strategy in this current form could be interpreted to read that the State is hopeful those existing projects expand their operations and deliver value to the state. The role of Government in this space, is unclear. This should be rectified, with Government playing a proactive role to facilitate growth across the sector, with an abundance of critical and other mineral sources across this geologically rich state. Funding mechanisms such as grants, dedicated approvals and risk management functions within DEM and the State Development team to interact with other State and Commonwealth co-regulators, and building a more robust and agile regulatory model, will incentivise investment to the explorers who discover critical minerals, and develop projects into producing mines and downstream projects.

There are a range of different commodities, projects and capacities across the state. Equal treatment, via a robust and efficient approvals and development system that aligns with competitive financing considerations and social expectations, requires State and Commonwealth Government support, in a way that has been lacking in this state, if the ambitions for critical minerals growth are to be delivered.

Action 3 – Recovery and secondary processing

The importance of effective Government and industry collaboration cannot be understated, to achieve the objectives outlined in this draft strategy. A range of innovative companies are already exploring



different pathways to extract value from minerals, whilst meeting net zero objectives in a feasible business model. The permitting process must facilitate these opportunities and recognise the important role timely functions play, in spurring further innovation, research and development.

For example, what role has the State taken, in investigating recovery and processing of critical minerals from mine wastes? Policy and legislation that enables private industry to lead this work, must be timely. However, with state-owned research and assets available to current and potential investors to the state, provided by its GSSA, the state could leverage its expertise whilst diversifying its project interest, in addition to the digitisation of core repositories via precompetitive geoscience data. To do so, more collaboration will be required.

Objective 2 – Leverage our Copper production

Action 4 – Update the state’s copper strategy

AMEC has consistently advocated for a refresh of the State’s Copper and Magnetite strategies, and were pleased to see both announced in numerous previous Budgets. An update on progress, including objectives, and how this refreshed Strategy will differ from the previous strategy, is welcome.

Has further work been undertaken on the Copper Taskforce announced in the 2023/24 SA Budget? The limited detail to support the actions around attractive investment and encouraging exploration, mining and processing of South Australian copper, are a missed opportunity of this draft Strategy. To distinctly outline the purpose each strategy will serve, it is important the Copper Strategy has unique objectives and measurables.

Objective 3 – Expand Australia’s critical minerals list

Action 5 – Advocate for adding copper and zinc to Australia’s critical minerals list

Action 5 stemmed from the Commonwealth’s consultation on Australia’s critical minerals list, following the 2023 release of the national critical minerals strategy. It is important that this strategy is not aged by what was a four-week process in mid-2023, by its inclusion as a standalone action in isolation.

AMEC advocated for Copper, Zinc, Uranium, Nickel, and Tin to be added to Australia’s Critical Minerals List, and have done so through the formal consultation process in mid-2023 led by the Commonwealth Government, as well as in an ongoing manner. The absence of further detail as to how the South Australian Government has undertaken its advocacy, and whether or not other bodies within the state have also aligned, is a missed opportunity to present a united industry voice.

AMEC is disappointed the State did not advocate for the inclusion of Uranium on the Commonwealth list, and has not referenced the mineral which is mined across the state in this document. Whilst Copper has been ‘named’ by South Australia as a critical mineral, it is unclear what purpose this serves. Does the State plan to release its own critical minerals list? Could Uranium and Zinc also not be added to that list?

Uranium (U)

AMEC was disappointed to see no mention of Uranium in the draft Strategy. AMEC advocated for Uranium to be recognised as both a critical mineral and a critical transition mineral, in the August

2023 consultation on Australia's national critical minerals list. South Australia has a renowned reputation for hosting Uranium resources and mines, and is one of limited Australian jurisdictions with ports EPBC cleared under the nuclear trigger, for the transport of radioactive material, found in most critical minerals. The advantages of South Australia's draft strategy highlighting the existing and growth opportunities of this mineral of which it has a well-versed history of regulating, are a competitive advantage.

Uranium appears on Canada's list of 31 critical minerals, outlined in their 2022-released Critical Minerals Strategy. Uranium and nuclear energy sources have been recognised as an important ingredient in the race to reach net zero emissions by 2050.

Uranium was removed from the US' list of critical minerals in the 2022 update, as they reclassified it as a fuel mineral¹. However, ranking members (Senators) of the Senate Committee on Energy and Natural Resources opposed this move, noting a decline in domestic production, with the US now almost entirely dependent on foreign sources of uranium². A similar outcome should be avoided in Australia. Uranium is used to power a significant number of nuclear reactors in the U, which generate one fifth of the nation's energy³.

Analysis from the International Energy Agency (IEA) found that the amount of energy supplied by nuclear power will increase by 40% by 2030 and double by 2050⁴. It is an essential component of the global net-zero emissions energy transition, and nuclear reactors are found to be one of the most cost-effective sources of low-carbon electricity.

Its omission from this strategy, and lack of state advocacy for recognition, reflect political dynamics around the mineral. However, this Strategy should be agnostic to politics, and instead focus on enhancing growth opportunities for South Australia's resources sector, where the State's royalties are strongly buffered by its Uranium mines.

AMEC recommends that Uranium is recognised for the role it can play, in the right policy settings, in providing cost-effective, emissions-reduced power for Australian communities. It should be recognised as a critical mineral in South Australia, and nationally.

Objective 4 – Accelerate resource discovery, evaluation and development

Action 6 – Investment in precompetitive geoscience data

The Geological Survey of South Australia (GSSA) is a highly regarded service the State provides, and the largest explorer the State has. Their role should be highlighted in this strategy. Geological and commercial expertise within the regulatory function, to inform decision making can facilitate greater opportunities for the sector.

¹ <https://www.iea.org/policies/15271-final-list-of-critical-minerals-2022>

² <https://www.energy.senate.gov/2022/2/energy-committee-leaders-to-secretary-haaland-helium-uranium-are-critical-minerals>

³ <https://www.theassay.com/articles/feature-story/how-critical-is-uranium-to-decarbonization/>

⁴ <https://www.iea.org/reports/net-zero-by-2050>

Precompetitive geoscience data is important, but it is only one element of a leading Geoscientific Survey. There are commercial and exploration functions the GSSA could and should undertake, that should be highlighted by this strategy. There are a range of current initiatives listed on page 42, but no timeframes to them. It is unclear if they are currently underway, or currently planned.

The map on page 12 highlights a range of different provinces and their planned or potential uses. However, the map does not list the wide variety of minerals projects including critical minerals, gold, magnetite, hematite, silver and uranium, that are spread across the state. This should be updated and included, subject to regular updates, to highlight the activity that exists across South Australia's minerals sector. From early-stage to advanced exploration, project development, producing mines and processing facilities, the State's minerals projects should be highlighted and showcased to the world, in a resource owned by the State Government. This map, inclusive of a range of projects developing across the state, should be available to investors and showcased when the South Australia Government has presence at trade shows and conferences.

This strategy when finalised, will likely be shared with trade office contacts and trade partners. It would benefit from showcasing a more robust minerals sector, reflective of the current state of play, than it currently does.

Action 7 – Robust regulation and strong ESG credentials

Lengthy approvals processes are arguably the most costly and high-risk undertaking for an explorer to traverse in South Australia. The more certainty of due process that can be given, including how increasing timeframes and regulatory expectations will be managed, including through the MERS digital transformation project for instance, would be welcome.

The draft strategy has not referenced mineral exploration, nor the approvals processes, extensive permitting and regulatory processes across the State, or extensive cross-agency collaboration. These are all vital to minerals projects from the earliest stages of exploration, through to mining and downstream processing, and can significantly shift the economics of a project. A greater understanding of these robust processes across Government and the community is required, to ensure projects can progress in a timely manner to deliver the critical minerals required for the envisaged decarbonisation pathway.

Without mineral exploration, the majority of the world's mineral resources would not be discovered. Mineral explorers are reliant on raising capital via the ASX to fund their projects. With a range of junior explorers across South Australia, an effective regulatory function that is efficient, is needed to provide sovereign stability and certainty to potential developers and investors to the state. Case studies of the time taken for a junior explorer to develop their project from exploration into a producing asset, could highlight the capability of the state to support project development, in this strategy. It could also prove an important avenue for efficiencies, and the need for a 'one-stop-shop' regulatory agency, to establish Memorandums of Understanding (MOUs) with co-regulators, to provide certainty of timeframes to co-regulated processes. A greater understanding of the regulatory efficiencies envisaged for critical minerals versus non-critical minerals, must be subject to consultation with industry.

The actions listed in the draft strategy in current form, do not provide sufficient detail or opportunity to measure delivery, of the State Government's input. Instead, they appear reliant on private industry driving growth of the sector with limited detail as to how the State, Commonwealth and Industry will work together to collaboratively drive growth. We welcome detail.

Action 9 – Enabling infrastructure

AMEC recommends the Strategy references the progress that has occurred, but work that is still to come, to support the growth of the State's minerals sector, via an efficient infrastructure and transport network. As land uses increase, and more minerals as well as other renewable energy sources and primary industry products are produced across the state, increasing port and rail capacity will be required.

Minerals companies require realistic costings and financial modelling to forecast feasibility at each stage of development. A holistic, Government-driven transport, freight and infrastructure strategy refresh has been welcomed, but must be overlaid with the developing economic heat map for minerals, to ensure due consideration has been given to effective mechanisms for developing and existing minerals projects who will require access to infrastructure.

The action does not have any detail as to funding sources available, a holistic overview of the work that is ongoing across multiple agencies to address infrastructure barriers, nor a plan to address port capacity constraints. Consultation with Infrastructure Australia and Infrastructure South Australia is recommended, to ensure sufficient consideration has been given to port capacity and updates on port projects for example, as minerals projects will have a heavy reliance on port access.

Action 10 – Innovation, talent and skills

AMEC recommends more Government-driven, targeted education and awareness programs directed at high-school students, to raise awareness of the careers available across industry. The engineering, processing, geology, chemistry and metallurgy skillsets that will require innovators across the sector, will also require frontline workers who have a keen desire to drive innovation and support a decarbonised economy. Consistent messaging that demonstrates the lifelong opportunities, development, and progress across the sector, is important to the ongoing delivery of this strategy.

Halloysite-kaolin and High Purity Alumina

AMEC welcomes the recognition of member company Andromeda Metals' Great White Project in the draft strategy. We recommend however, that terminology that is used in the draft aligns with the most recent strategy and ASX-announcements made by the Company. Further detail has been provided in a separate document, to ensure consistency.

Final comment

AMEC welcomes ongoing consultation and engagement with industry as South Australia finalises its Critical Minerals Strategy, and commences work to achieve the objectives. The actions must be SMART, and information contained in the strategy that is released upon final publication, reflective of industry feedback to ensure it is current, fit for purpose, and can drive the state's development of a competitive critical minerals industry. In order to do so, significant investment is required, from the State Government, Commonwealth, and private sector. To attract this private investment and

leverage expertise, commitment from all stakeholders and progress against tangible objectives will be required. AMEC welcomes continued opportunities to deliver value to the minerals sector, and South Australian community.

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