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Dear Kate

WESTERN AUSTRALIA'S BATTERY & CRITICAL MINERALS STRATEGY: STAKEHOLDER CONSULTATION PAPER 2023

The Chamber of Minerals and Energy of Western Australia (CME) is the peak representative body for the resources sector in WA. CME is funded by member companies responsible for more than half of Australia's major critical minerals projects by value.¹

Demand for critical minerals continues to grow rapidly and is set to double by 2030.² For example, the global energy transition has driven a three-fold increase in demand for lithium, 70 per cent growth for cobalt and 40 per cent for nickel.³ For the last financial year in WA, lithium spodumene concentrate sales reached an all-time high of \$21 billion, nickel almost rose to a 15-year high at \$5.7 billion, and mineral sands achieved a record \$1.4 billion.⁴ However, despite intentions by various governments to move into downstream processing, a lack of diversification in the midstream value chain internationally⁵ and in Australia⁶ still exists.

With an update of the Australian Critical Minerals List imminent, CME welcomes the timely refresh of the 2024-2030 Battery and Critical Minerals Strategy (the Strategy) by the Department of Jobs, Tourism, Science and Innovation (JTSI). CME also appreciates JTSI's efforts to engage widely on the 2023 Stakeholder Consultation Paper with the recent presentation to CME members and industry roundtable.

Overall, we **support a refreshed global value chain approach to the Strategy**; ensuring alignment of the WA opportunity with the rapidly evolving global landscape on the inputs required for the energy transition and digital transformation. For our detailed responses to the consultation paper's questions, please see the remainder of this submission.⁷

Background

Achieving the International Energy Agency's (IEA's) Net Zero Emissions by 2050 Scenario will require at least six times more critical mineral inputs in 2040 compared to 2020.⁸ Adding to this demand pressure, the IMF notes that geopolitical trade tensions could drive an additional price increase of 300 percent for selected critical minerals and lead to 30 percent lower investment in solar panels, wind turbines and electric vehicles (EVs) needed for the energy transition.⁹ On the supply side, structural bottlenecks in supplying metals such as copper, nickel, cobalt and lithium to the world have the potential to derail the world's energy transition.¹⁰

¹ 48 of 81 projects. Commonwealth of Australia, [Resources and Energy Major Projects 2022](#), Department of Industry, Science and Resources, dataset at 31 October 2022, 9 January 2023.

² IEA, [The Role of Critical Minerals in Clean Energy Transitions](#), May 2021, p 8.

³ IEA, [Critical Minerals Market Review 2023](#), 11 July 2023.

⁴ Copper and cobalt sales were weaker. Government of Western Australia, [Latest statistics release](#), Department of Mines, Industry Regulation and Safety, 10 November 2023.

⁵ IEA, [Critical Minerals Market Review 2023](#), 11 July 2023, p 8. International Renewable Energy Agency (IRENA), [Geopolitics of the energy transition: Critical minerals](#), 12 July 2023, p 38.

⁶ Commonwealth of Australia, [Australian Critical Minerals Prospectus 2022](#), Australian Trade and Investment Commission, 8 December 2022, pp 20-23.

⁷ Unless otherwise stated, all references hereafter in this submission refers to both battery and critical minerals. Many G7 and G20 countries synonymously treat battery minerals, metals and other materials needed for the energy transition as critical due to the continuous changing assessment of 'criticality'.

⁸ IEA, [The Role of Critical Minerals in Clean Energy Transitions](#), May 2021, p 8.

⁹ International Monetary Fund, [A critical matter](#), Finance and Development feature article, vol 60, iss 4, published 30 November 2023.

¹⁰ Boer L, Pescatori A and Stuermer M, [Energy transition metals: Bottleneck for net-zero emissions](#), 'Journal of the European Economic Association', 14 June 2023.

There is a narrow window of opportunity for WA to capitalise on this enormous economic opportunity and become a major participant in the global value chain.

While we agree with the consultation paper that significant global policy shifts have occurred since the last strategy update in January 2021, the underlying policy, regulatory and structural challenges in the WA context are essentially the same. In responding to JTTSI's consultation questions, this submission thus seeks to reiterate our existing views and policy recommendations since 2018.¹¹

We strongly support mechanisms of an enduring nature that benefit the resilience of the pit-to-port supply chain and bankability of projects, such as where there are synergies in providing servicing infrastructure or modernising waste legislation.

1.1 Which value chain segments should WA prioritise under the strategy and why? Does this vary for different minerals?

The WA Strategy should initially focus on further developing and diversifying the upstream and midstream sections of the critical minerals supply chain, leveraging our existing comparative advantages to sustainably extract greater value from WA's resources. **Policy and financial support should be directed to these parts of the value chain where there is existing capability, such as established pathways to market and technical expertise.** Existing capacity and capability to process, and therefore policy support needs, will vary for each mineral, alongside its criticality.¹²

Due to structural shifts in industrialisation and rates of technological advancement in the global economy, it would be difficult for WA to establish and maintain an internationally competitive position in the downstream value-adding segment of the lithium-ion battery value chain (i.e. component manufacturing including battery cells, magnets and electrodes).^{13 14} While aspirations to capture more of the critical minerals value chain domestically is supported, it will require significant and well targeted investment alongside supportive policy settings as described elsewhere in this submission. Of fundamental importance is the unlocking of additional upstream materials to provide the essential feedstock for value adding onshore. Regardless of mineral, we caution against the sole prioritisation of the downstream segment in the Strategy given Australia's productivity growth,¹⁵ skilled workforce¹⁶ and energy transition challenges. The labour and energy (emissions)¹⁷ intensity of midstream and downstream manufacturing in WA and Australia is also challenge, which cannot be addressed by this Strategy alone.

As such, CME supports the WA Government's prioritisation of the midstream segment of the global value chain via vertical economic diversification.¹⁸ With an existing upstream industry and significant potential for expansion, there is **a stronger opportunity to pursue value-added intermediary (midstream) products such as chemicals where criticality is higher** instead of semi-finished or finished goods.

Critical mineral supply comes from three sources – primary in ore deposits, secondary as mineral byproducts or tertiary as imports in semi-finished or finished goods.¹⁹ As described further below, the WA Government

¹¹ Chamber of Commerce and Industry WA, [WA's future in the lithium battery value chain](#), report prepared by Australian Venture Consultants (AVC), November 2018; CME, [Mining Amendment Regulations \(No 5\) 2019: Consultation draft](#), submission to the Department of Mines, Industry Regulation and Safety, 24 January 2020; [National Manufacturing Priority: Critical minerals processing roadmap](#), submission to the Department of Industry, Science, Energy and Resources (DISER), November 2020; [Future Fuels Strategy: Discussion paper](#), submission to DISER, April 2021; [Australian Critical Minerals Strategy 2023: Discussion paper](#), submission to the Department of Industry, Science and Resources (DISR), 13 February 2023; [Accelerating opportunities in WA's critical minerals sector](#), position paper, 17 June 2023; [Critical Minerals List: Issues paper](#), submission to DISR, 16 August 2023.

¹² Monash University, [A response to questions raised concerning Australia's Critical Minerals List](#), submission prepared by the Critical Minerals Consortium to DISR, 17 August 2023.

¹³ Other advanced economies are also facing this challenge. The US recognises it must compete with 20 years of technological investment and other notable industry challenges such as labour and unwillingness to pay a premium for 'buy local'. Li-Bridge, [Building a Robust and Resilient U.S. Lithium Battery Supply Chain](#), US Department of Energy, February 2023. However, the UK considers there is a domestic opportunity because it currently produces 10 per cent of all vehicles in the EU. Green Finance Institute, [Guide to Investing in the EV Battery Supply Chain](#), June 2023, p 43.

¹⁴ AVC, [A case for building resilience into WA's lithium industry](#), report commissioned by CME and the Association of Mining and Exploration Companies, published 21 August 2020.

¹⁵ Commonwealth of Australia, [Working Future: The Australian Government's White Paper on Jobs and Opportunities](#), The Treasury, 25 September 2023.

¹⁶ Commonwealth of Australia, [The clean energy generation: Workforce needs for a net zero economy](#), Jobs and Skills Australia, capacity study report, 3 October 2023.

¹⁷ Llamas-Orozco JA, Meng F, Walker GS, Abdul-Manan AFN, MacLean HL, Posen ID and McKechnie J, [Estimating the environmental impacts of global lithium-ion battery supply chain: A temporal, geographical, and technological perspective](#), *PNAS Nexus*, vol 2, iss 11, November 2023, pgad361.

¹⁸ Due to opaqueness and nature of long-lead supply chains in international markets where critical minerals are inputs, we consider it is unreasonable for the WA Government to pursue horizontal economic diversification.

¹⁹ Raju RD, [Critical minerals: Their nature, occurrence, recovery and uses](#), *Current Science*, vol 119, no 6, 25 September 2020.

could facilitate the unlocking of secondary sources as a means of building scale whilst supply from primary sources continues to develop.

Lastly, we note several submissions were made to the Australian Government on the assessment of criticality for different minerals. CME's submission supported the inclusion of copper, nickel, bauxite-alumina (aluminium), zinc and molybdenum.²⁰ The Australia Critical Minerals List can be used to help indicate segments of the value chain that should be prioritised. Specifically, we would like to draw JTSI's attention to The Australian Industry Group's submission, which recommends separate consideration of supply and demand-side opportunities for export and domestic use of critical minerals for the energy transition, respectively.²¹ We, therefore, recommend the WA Government work closely alongside the Critical Minerals Office on developing policy and financial support to unlock these opportunities.

1.2 Going forward, should the strategy also consider other related downstream opportunities such as semiconductor and permanent magnet value chains?

The Strategy should reflect WA's most likely immediate and medium-term opportunities in the evolving global value chain. As such, the Strategy should focus on **enabling scale and resilience in up- and midstream segments to respond to market opportunities faster and drive down costs**, fostering the international competitiveness and longevity of the industry. As discussed above and below, we **would not recommend a specific or singular focus on specific minerals nor downstream opportunities such as semiconductor and permanent magnet value chains in this iteration of the Strategy**. CME supports a broad-based approach to facilitating economic diversification and ensuring the sustainable development of new industries.

1.3 Should the strategy include a particular focus on developing specific minerals?

We acknowledge there may be a missed opportunity if WA fails to secure a niche market for a specific mineral. However, this should not be pursued at the unreasonable expense of other minerals more likely to yield an enduring benefit to the State. Since it is difficult to predict the underlying demand for specific minerals due to unknowns in technological change (metal substitution variability) and stringency of climate policy action,²² we **recommend against a focus on developing specific minerals in this iteration of the Strategy** and consider the Strategy should be broad-based and market-led, focusing on sustainable outcomes.

2. Are there matters outside the scope of the Australian Critical Minerals Strategy focus areas that should be considered for WA in defining the priority action areas of WA's strategy?

Like the Australian Critical Minerals Strategy,²³ in defining the priority action areas of WA's strategy there is an opportunity to dovetail and coordinate action with other government strategies and initiatives. For WA, this should include the energy transition in the South West Interconnected System, the Sectoral Emissions Reduction Strategy, WA Renewable Hydrogen Strategy, Global Advanced Industries Hub and Westport.

²⁰ CME, [Critical Minerals List: Issues paper](#), submission to DISR, 16 August 2023.

²¹ The Australian Industry Group, [Re: Updating Australia's critical minerals list](#), submission to DISR, 17 August 2023.

²² Driven by steep demand from front-loading of net zero commitments. Boer L, Pescatori A and Stuermer M, [Energy transition metals](#), International Monetary Fund Working Paper WP/21/243, October 2021. IEA, [The Role of Critical Minerals in Clean Energy Transitions](#), May 2021.

²³ Commonwealth of Australia, [Critical Minerals Strategy 2023-30](#), DISR, updated 7 July 2023, pp 49-50.

3. What are the most important actions required to support WA's battery and critical mineral sector?

- What is the order of priority to implement these actions?
- How is the WA Government placed to support development of the sector compared to the Australian Government, researchers and industry?
- Are these actions equally significant across different mineral and value chain opportunities?
- How applicable are these actions to projects in different development stages?

CME's WA 2024-25 Pre-Budget Submission²⁴ (PBS) contains several recommendations to support the development of the sector. We consider the following actions as most important because they will equally benefit different mineral and value chain opportunities irrespective of the development stage.²⁵

- Approvals reform to ensure projects can get up and running faster (i.e. capitalise on upswings in prices; please see our response to question 3.8 below). Once efficient approvals processes are embedded they should be sufficiently resourced to meet demand. Economic modelling commissioned by the Department of Industry, Science and Resources found a 'faster project development times' scenario for critical minerals projects yielded the highest net present value of \$170.8 billion and additional cumulative 329,000 full-time equivalent jobs out to 2040 – **more than double the status quo**.²⁶
- Grant, tax or royalty incentives to improve WA's ability to compete internationally, please see our response to question 3.3 below. CME called for consideration of a value-added royalty rebate for midstream and downstream products in our WA PBS.
- Enabling infrastructure, which includes access to turnkey strategic industrial land, low-emission, reliable and cost-competitive energy, ports, intermodal hubs, water and waste services. Please see our response to question 3.1 below and our PBS.
- Access to skilled workers, including priority migration and targeted domestic training programs to build the necessary mid- and downstream skills, including a higher focus on science, technology, engineering and mathematics (STEM) disciplines in vocational education and training (VET) and universities. Please see our response to question 3.6 below. With a tight labour market, access to people may have a larger negative effect on constraining production in the short term.
- Access to intellectual property (IP) and international supply chain partners, please see our response to question 3.4 below.

Targeted incentives and programs must be supported by a robust value chain analysis and business case to ensure sustainable outcomes for WA. When we previously surveyed our critical mineral members, two-thirds indicated the WA Government's support of the sector was uncompetitive and the remaining third responded neither competitive nor uncompetitive relative to other jurisdictions. **Because of the 'size of the prize', we strongly recommend a complementary, combined federal-state effort to deliver these actions.**

3.1 Critical mineral processing hubs

- What factors need be considered to establish investment-ready industrial precincts?
- How can industry participate?
- Where in WA would a critical mineral processing hub be best located?

WA has substantial existing physical upstream mining infrastructure, but a lack of access for new and emerging industries can preclude investment readiness. Due to geology, critical mineral projects are often in regional and remote WA.²⁷ The transport requirements during a project's lifecycle (from development, construction to commissioning) and once operational (i.e., pit-to-port) require proponents to transverse the jurisdiction of multiple local governments, port authorities, state and federal agencies. Even for projects of

²⁴ CME, [WA 2024-25 Pre-Budget Submission](#), 27 October 2023.

²⁵ These identified actions reflect direct feedback received from our Critical Minerals Working Group over the last two years, including a survey conducted in the first quarter of last year (March 2022), input to our position paper (May to June 2023), submission to the Critical Minerals List (August 2023) and our federal pre-Budget submission drafting process (November 2023).

²⁶ PwC, [The economic potential of Australia's critical minerals and energy transition minerals: Economic impact analysis of Australia's critical minerals and energy transition minerals and downstream processing](#), report prepared for the Department of Industry, Science and Resources, updated 7 July 2023, pp 20-24.

²⁷ Inclusive of the Peel region.

significance, proponents can experience delays in reaching an agreement when decision-making agencies are inconsistent with one another.²⁸

CME members believe further improvements could be made in the provision of Strategic Industrial Areas (SIAs), particularly about 'turnkey readiness'. Members report that for some existing SIAs, road access and utility connections for power, water and sewage are not established, leaving proponents to organise and fund such connections.²⁹ This can make projects cost-prohibitive, particularly for smaller firms, as the first 'mover' (proponent) is asked to fund the full cost of new infrastructure despite the aim of an SIA to share the costs of shared infrastructure.

SIAs should be located as close as practical to upstream developments, connected to utilities (including power, water and sewage) and adjacent transport infrastructure (e.g. roads and rail, etc). Preliminary consultation, investigations and approvals related to land tenure, heritage and environment (e.g. native vegetation clearing and associated offsets) should be progressed to ensure that the area fits the intended industrial purpose. In addition to the \$160 million SIA Lease Incentive Scheme and \$50 million Industrial Land Fund, the WA Government should proactively **ensure SIAs and General Industrial Areas (GIA) are investment-ready for infrastructure and industrial development**.

While we support DevelopmentWA's efforts to undertake environmental due diligence and gaps analysis for new SIAs³⁰ it is important that existing SIAs are also subject to gaps analysis and rectification efforts. We support hubs that encourage industrial symbiosis³¹ and a circular economy. About a quarter of our existing SIAs demonstrate active industrial ecosystems³² and are not internationally competitive in scale or advantages with industrial zones elsewhere in the world.³³ For transparency, we therefore recommend the WA Government publicly share learnings from the SIA Gaps Analysis conducted by DevelopmentWA and JTSI and provide a formal response on how these issues will be addressed for existing SIAs. This upfront commitment will ensure prospective proponents are not turned away from existing SIAs due to lack of servicing capacity. To support capacity for longer-term scalability, the WA Government should also consider extending eligibility of the SIA Lease Incentive Scheme to existing SIAs and putting upfront favourable whole-of-project conditions, such as strategic environmental assessments and regional land use protection plans, on the table for proponents.³⁴

Related to the challenge of hubs and investment readiness, the State Government also needs to adopt a **strategic whole-of-government approach to offsets (both biodiversity and carbon), including consideration of how the development of the industry will impact offset demand and project execution**. Irrespective of the type of industry and project, the execution of offset projects in WA is affected by land tenure and land competition issues, inconsistent offset conditioning and processing delays within and between state and federal agencies. For biodiversity offsets, there is an opportunity to investigate alternate approaches to achieve landscape-scale biodiversity outcomes to meet offset demand associated with project development.

3.2 Research commercialisation

- What value is there in establishing a WA research commercialisation institute?
- How could such an institute best address barriers to industry development?
- What type of research equipment or activities will be most beneficial at an institute?

There is likely to be a limited return to the State in establishing a separate, standalone research commercialisation institute in WA for the development of the battery supply chain. Competition to attract

²⁸ The establishment of a permanent pathway for assessment of development approvals is proposed to benefit the Flat Rocks Wind Farm project, of which varying levels of consultation with community and local government occurred over the last 15 years.

²⁹ As an example, the Mungari SIA in the Goldfields is located near several critical minerals mines and has been available as industrial land for close to 30 years but is yet to be used.

³⁰ We note the services Engineering Gap Analysis Report for Ashburton North SIA is a new feature although not publicly available, whilst Maitland SIA also has a gaps analysis underway.

³¹ Bossilkov A, van Beers D. and van Berkel R, *Industrial symbiosis as an integrative business practice in the Kwinana Industrial Area: Lessons learnt and ways forward*, 11th International Sustainable Development Research Conference, Finland, 2005. Harris S, *Industrial symbiosis in the Kwinana Industrial Area (WA)*, *Measurement + Control*, vol 40, iss 8, 8 October 2007.

³² AVC, *A case for building resilience into WA's lithium industry*, report commissioned by CME and the Association of Mining and Exploration Companies, published 21 August 2020, p 8.

³³ Lynas purchased a 149-acre greenfield site (equivalent to ten Melbourne Cricket Grounds) in an existing industrial zone that will allow co-location of plants and potential future growth opportunities such as a circular mine. It was selected for proximity to a skilled workforce, potential customers, infrastructure and logistics. Lynas Rare Earths, *US DoD strengthens support for Lynas US facility*, ASX announcement, 1 August 2023.

³⁴ CME, *Planning reform Phase 2*, submission to the Department of Planning, Lands and Heritage, 31 August 2021; *Foundations for a Stronger Tomorrow: Draft State Infrastructure Strategy*, submission to Infrastructure WA, September 2021.

research funding into such a field of intense technological change and geopolitical involvement will be fierce.³⁵ Instead, there are existing research centres and industry-university consortiums that could be expanded in capability and scale. We therefore support the WA Government continuing funding support of existing public-private research projects conducted by Future Battery Industries Cooperative Research Centre and Minerals Research Institute of WA. We believe that research activities into the mid-stream battery chemicals supply chain is likely to be the most beneficial for WA, as a large scale and competitive mid-stream (and up-stream) industry is required before any assessment of WA's ability to move further downstream.

Like the US approach,³⁶ any initiatives to facilitate research commercialisation should co-locate in hubs, be underwritten by an IP holder or original equipment manufacturer (OEM) with market share and support the development of a circular economy.

3.3 Access to capital and financial incentives

- How can the WA Government address access to capital challenges to support the sector?
- What initiatives should the WA Government consider?

In line with CME's PBS, the following actions will be most impactful in ensuring the competitiveness of the WA critical minerals sector to access highly mobile global capital:

- Stable and cost-competitive fiscal settings. There should be an ongoing commitment to no new or increased taxes and we ask the WA Government to engage with industry to ensure turnkey SIAs.
- Efficiency in regulation to reduce timeline uncertainty, assisting final investment decision. Approvals must be more efficient and timelier while maintaining strong environmental and other standards to enable the transition to net zero. We ask the WA Government to advocate and work with the Australian Government to ensure federal reforms do not introduce duplication, inconsistency and further delays.
- Energy transition and security to demonstrate the ability to compete internationally. Further urgent action is required to deliver a low-emission, reliable and cost-competitive energy system by 2030 to meet voluntary and legislated targets.
- Skilled workforce development to support all phases of industry development including construction, commissioning, operations and maintenance. Sufficient funding for training a skilled and productive local workforce while enabling access to required global skills and expertise in midstream processing is critical.

With regards to specific financial incentives, we acknowledge that WA and Australia cannot match the quantum of funding and incentives offered in competing jurisdictions such as the United States, Canada or Europe. Still, a combination of well-targeted incentives and actions can help move the dial.

At the state level CME calls for the WA Government to consider a value-added royalty rebate for mid- and downstream processing projects in addition to the actions outlined above. We reiterate our 2020 positions³⁷ that there may be evidence to lower royalty rates on a case-by-case basis for intermediary products (e.g. lithium hydroxide, magnetite concentrates, pellets and heavy rare earths), particularly as the presiding *ad valorem* netback method is now over 40 years old. The current netback method does not accommodate the significant complexities inherent in contemporary value-adding processing circuits to produce concentrates of higher grade and progressive chemical treatment. We also note the availability of funding for critical and battery minerals projects under the \$60m 'New Energies' round of WA's Investment Attraction Fund.³⁸

At a federal level, the WA Government can support existing calls by businesses and industry for the Australian Government to:

- a) Reduce the corporate income tax rate to the OECD average for all Australian businesses.
- b) Offer an Australian production tax credit or similar financial incentive (e.g. instant or accelerated depreciation).

³⁵ Governments worldwide and OEMs are issuing international calls of interest for research into defence, military and battery storage applications.

³⁶ US Economic Development Administration, [Biden-Harris Administration Designates Tech Hub in South-Central Missouri to Drive Innovation in Critical Mineral Processing to Support Battery Technology](#), media release, 23 October 2023. Das D, [Role of the State in the Energy Transition: The Case of China and Lessons for the United States](#) 24 October 2023.

³⁷ CME, [Mining Amendment Regulations \(No 5\) 2019: Consultation draft](#), submission to the Department of Mines, Industry Regulation and Safety, 24 January 2020; AVC, [A case for building resilience into WA's lithium industry](#), report commissioned by CME and the Association of Mining and Exploration Companies, published 21 August 2020.

³⁸ WA Government, [\\$134 million boost to create jobs, reduce emissions](#), 16 November 2023.

- c) Expand eligibility of the Research and Development (R&D) Tax Incentive program or other government grants for pilot studies of scale and commercialisation activities.

3.4 Investment attraction and partnerships

Where should the WA Government target efforts to develop further international partnerships to unlock funding, offtake and technical expertise for the sector?

To manage trade expectations, the WA Government should coincide and strengthen its efforts in developing international partnerships alongside the Australian Government. Australia is a signatory to at least a dozen international alliances and joint partnerships on critical minerals and supply chain resilience.³⁹ As critical minerals are subject to increased foreign investment scrutiny and can trigger assessment under federal environmental legislation due to the presence of matters of national environmental significance,⁴⁰ we recommend any effort to unlock funding, offtake and technical expertise should be a joint state-federal government effort from the beginning.

In addition, the WA Government could assist the Australian Government in efforts to ensure that Australian battery chemical projects with international investor or offtake partners gain access to the incentives offered in partner countries (such as the US and Europe).

To the extent it is reasonably practicable and sustainable, we support the government's intention to onshore commercially viable value-adding opportunities domestically and offshore the remaining supply chain opportunity via 'ally- and friend-shoring' international partnerships. We note with the future Australia-European Union trade agreement, member states like the Netherlands are profiling co-investment opportunities and risk sharing in Australian companies via offtakes and supply contracts.⁴¹

We support the WA Government targeting existing companies in the downstream global value chain to participate as customers, capital financiers or IP providers (e.g. core IP holders and major OEMs)⁴² in exchange for firm rights to product offtake at mine gate or at downstream supply points. This will help WA integrate with the global value chain and establish a sustainable market position in the long term. However, we note sizeable and stable policy and financial levers across all levels of government will be needed for original equipment manufacturers to shift capital to WA.

3.5 Mining and exploration

- What government support is needed to further support and expedite identification and development of new battery and critical minerals resources, including through reprocessing of tailings or waste streams?
- What barriers need to be addressed?

Canada has a 30 per cent Clean Technology Manufacturing Tax Credit for reprocessing secondary critical minerals and a 30 per cent Critical Mineral Exploration Tax Credit for flow-through shares agreements to support exploration expenditure on specific minerals, including nickel and copper. Due to these tax credits, Canada's year-on-year lithium and nickel exploration expenditure growth has caught up to Australia's.⁴³

There is an opportunity for the WA Government to address the regulatory and commercial barriers to unlocking secondary critical minerals supplies, supporting the building of processing capability closer to the source. CME members with global vertically integrated operations are investing overseas in initiatives to

³⁹ Energy Resource Governance Institute, [Critical Minerals Mapping Initiative](#), [Supply Chain Resilience Initiative](#), [Minerals Security Partnership](#), [Sustainable Critical Minerals Alliance](#), [Declaration of Intent with Germany](#), [Statement of Intent with United Kingdom](#), [Australia-India Critical Minerals Investment Partnership](#), [Bilateral Dialogue with France](#), [Australia-United States Climate, Critical Minerals and Clean Energy Transformation Compact](#), [Australia-Japan Critical Minerals Partnership](#) and [Memorandum of Understanding with the Republic of Korea](#). Also see Appendix A of the Australian Critical Minerals Strategy for partnerships not listed here, p 57.

⁴⁰ Critical mineral processing contains naturally occurring radioactive materials.

⁴¹ Netherlands Enterprise Agency, [Critical minerals opportunities in Australia 2023](#), Ministry of Foreign Affairs, 8 March 2023.

⁴² Bruce S, Delaval B, Moisi A, Ford J, West J, Loh J and Hayward J, [Critical Energy Minerals Roadmap](#), Commonwealth Scientific and Industrial Research Organisation, May 2021.

⁴³ IEA, [Critical Minerals Market Review 2023](#), 11 July 2023, pp 21 and 24.

improve the recovery of critical minerals such as cobalt and rare earths.⁴⁴ Global investment in battery waste and recycling has occurred mainly in China, Europe and the US.⁴⁵

3.6 Skills and training

- Where should the emphasis be among VET, university and skilled migration as sources of talent to build capacity in the sector?
- What are the immediate training needs not currently addressed?

For the resources sector globally, workplace upskilling and reskilling priorities over the next five years will include 'systems thinking' and 'analytical thinking'.⁴⁶ Technologies adopted for climate change mitigation are the most likely to drive industry transformation and job creation in the sector.⁴⁷ With the skills profile changing and to build capacity in the sector, there needs to be a greater focus on modernising STEM subjects for broader uptake and developing skills for lifelong learning.⁴⁸

In Australia, Jobs and Skills Australia found significant coordination effort is required to offset structural transition costs.⁴⁹ Actions will include dramatically increasing the number of electricians through the VET system, expanding electricity production eight-fold, and increasing levels of targeted migration for professionals such as scientists as demand will outrun domestic supply.

The energy transition will have skilling and training implications for the 50,000+ individuals employed as traditional automotive mechanics, electricians, fitters and machinists across WA.⁵⁰ The tooling requirements and spare parts for servicing battery, hybrid, plug-in or hydrogen fuel cell EVs are significantly less but will instead require dual or hybrid trades in electro-technology specialisations.⁵¹ Work-integrated learning projects, which provides exposure to these changing technologies, can support skills development between industry and education providers. The WA Government should also work with existing industry-led Jobs and Skills Councils and the proposed TAFE Centres of Excellence to shape the education and migration policy settings needed for our future workforce.⁵² On migration, supporting and fast-tracking visa approvals for skills and qualifications required for the battery chemicals industry would be welcome.

As New South Wales recommends,⁵³ greater consideration of overlapping skills and training requirements between sectors such as renewable energy, transmission, mining, manufacturing and infrastructure is needed to build capacity in the future workforce. There is an opportunity in the servicing supply chain to redeploy similar skills between different projects with different durations and locations. Any emphasis in the VET, university and skilled migration systems to build capacity should take a whole-of-economy approach.

3.7 Social licence to operate

- How can WA capitalise on its existing advantages to create economic opportunities for all Australians, and ensure benefits flow to regional communities and First Nations Peoples?

A surveyed sample of CME's members directly employed 65,483 Western Australians on a full-time basis in 2021-22, whilst the sector's supply chain spending indirectly supported employment of another 259,959 Western Australians – equivalent to almost one in five jobs across the WA economy.⁵⁴ This supply chain

⁴⁴ Tronox Holdings PLC, [2022 Annual Report](#), 1 April 2023; Glencore International AG, [Glencore and Li-Cycle announce joint study to develop a European recycling hub](#), 9 May 2023; Institute of Materials, Minerals & Mining, [New technology to recover valuable metals from mine water](#), 12 May 2023.

⁴⁵ IEA, [Critical Minerals Market Review 2023](#), 11 July 2023, pp 46-47.

⁴⁶ Instances where the mining and metals industry assigned a higher focus above the global mean. World Economic Forum, [The Future of Jobs Report 2023](#), skill profiles, 30 April 2023, pp 255-284.

⁴⁷ Ibid, mining and metals industry profile, p 221.

⁴⁸ Commonwealth of Australia, [5-year Productivity Inquiry: From learning to growth](#), Productivity Commission, inquiry report, vol 8, 7 February 2023, pp 85-92.

⁴⁹ Commonwealth of Australia, [The clean energy generation: Workforce needs for a net zero economy](#), Jobs and Skills Australia, capacity study report, 3 October 2023.

⁵⁰ Australian Bureau of Statistics, [Labour force, Australia, detailed](#), '6291.0.55.001 EQ08 Employed persons by occupation unit group of main job', August 2023 reference period, 21 September 2023 release.

⁵¹ Commonwealth of Australia, [The clean energy generation: Workforce needs for a net zero economy](#), Jobs and Skills Australia, capacity study report, 3 October 2023.

⁵² Commonwealth of Australia, [Working Future: The Australian Government's White Paper on Jobs and Opportunities](#), The Treasury, 25 September 2023, p 98-130.

⁵³ University of Technology Sydney and SGS Economics and Planning, [Employment, skills and supply chains: Renewable energy in NSW](#), final report prepared for the State of New South Wales, January 2022.

⁵⁴ CME, [2021-22 Total direct economic contribution to WA](#), published June 2023.

spending included payments to 14,003 local businesses, 958 community organisations and 68 local councils with a primary place of trade in WA. Currently, the resources sector creates economic opportunities for all Australians with benefits flowing to regional communities. In line with the Productivity Commission's findings, we note, however, there is an opportunity for the WA Government to coordinate the sector's community-focused investments better and maximise effectiveness of benefit-sharing.⁵⁵

There is an opportunity for the WA Government to coordinate and align efforts with the Australian Government in demonstrating environmental, social and governance (ESG) credentials for critical mineral projects. For example, the Department of Climate Change, Energy, the Environment and Water facilitated pilot testing of Taskforce on Nature-related Financial Disclosures Framework reporting for critical minerals used for producing clean energy technologies.⁵⁶

To avoid duplication, it is important the WA Government leverages national and international synergies on sustainability and social licence to operate. Further to the above framework, the Australian Accounting Standards Board has also released Exposure Drafts for Sustainability Reporting Standards 1 and 2 to align with international sustainability-related and climate-related financial disclosures. Over half of our ordinary members align their sustainability and climate reporting against international frameworks.

CME's core recommendations regarding regional liveability are contained in Section 5 of our PBS, which includes:⁵⁷

- Priority budget allocations to achieve positive outcomes for regional health, education, economic and social infrastructure.
- Ensure housing strategies target bringing forward land and housing releases in areas of projected highest demand
- Advocate to the Australian Government on broadening fringe benefits tax exemptions to employee-sourced housing and employer-provided childcare off-premises.

3.8 Approvals

- Opportunities to further streamline regulatory processes to support the sector

CME supports setting a goal of streamlining end-to-end approvals on all projects, including critical minerals projects. **Greater visibility and coordinated effort are needed to reduce the end-to-end regulatory complexity and burden⁵⁸ of the interagency approvals process for getting new, complex projects such as critical minerals up and running. It is also critical that proponents have visibility and certainty over the end-to-end, and intermediate timelines for approvals.** As a developing industry, critical minerals will have broader implications for the environment (i.e., waste and emissions), dangerous goods safety, industrial land use planning and infrastructure, all of which are in the remit of the State. Although it is yet to be fully operational, the whole-of-government \$31.8 million Green Energy Approvals initiative has the potential to play an important facilitation and streamlining role in addressing these issues, and the performance of the initiative should be monitored and measured.

When the Green Energy Approvals initiative is operational, there is an opportunity to align project facilitation services to ensure that State and Federal assessment processes, including the changes proposed under the Australian Government's Nature Positive Regime, can be conducted by one agency. This action would reduce administrative burden and costs, ensure consistency in conditioning and shorten the end-to-end approvals processing timeframe. Addressing these ongoing approvals processing issues is an enabler to all types of project development in WA.

CME recently welcomed the WA Government's announcement⁵⁹ to improve processes related to the environmental approvals system. Further opportunities to streamline end-to-end approval processes, including appeals and consultation requirements across federal-state processes, will also be investigated.

⁵⁵ Chapter 10 findings and leading practices. Commonwealth of Australia, [Resources sector regulation](#), Productivity Commission, study report, November 2020.

⁵⁶ Commonwealth of Australia, [TNFD Pilot study value chain deep-dive: Critical mineral mining for producing clean energy technologies](#), Department of Climate Change, Energy, the Environment and Water, September 2023.

⁵⁷ CME, [WA 2024-25 Pre-Budget Submission](#), 27 October 2023.

⁵⁸ Institute of Public Affairs, [The growth of red tape: Causes and solutions](#), 6 November 2023.

⁵⁹ Government of Western Australia, [Overhaul of approvals system to unlock jobs, investment](#), media statement by the Hon Roger Cook, Premier, 12 December 2023.

We also welcomed the WA Government's release of its response to the recommendations from the Independent Review into Environmental Approvals led by Dr Paul Vogel and David McFerran. Streamline WA conducted a separate Red-tape Reduction Review consultation in October. While those findings have not yet been released, they appear to have informed the initiatives which have been announced. CME directly participated in both reviews and looks forward to continuing to work with the WA Government while implementing the proposed reforms. We must take action on these important initiatives as soon as possible to capitalise on the opportunities in front of us.

Some CME members have also provided specific recommendations in their submissions to this Strategy refresh that should be considered as part of the WA Government's efforts to streamline regulatory processes. Some of these suggestions include:

- Adopting a 'permitting dashboard' akin to that used in the United States under the FAST-41 process.⁶⁰
- Removing and avoiding duplication between state and federal regulatory settings (such as climate reporting and emissions reductions requirements) and across state-based approvals agencies including in the assessment of 'social surrounds' under the *Environmental Protection Act 1986* (WA).

Other considerations for the Strategy refresh

If it is within scope, implementation of the Strategy's vision or goals should be refined to mean striving towards international competitiveness. It is unclear if 'world leading' or 'destination of choice' implies achieving competitiveness in a global value chain. For example, the UK Government's 2030 vision is to have a 'globally competitive battery supply chain that supports economic prosperity and the net zero transition'.⁶¹

Conclusion

With the world's energy and digital transformation, there is a significant opportunity for WA to diversify its economy. However, a sustainable, domestic battery and critical minerals value chain will require substantive, coordinated policy and financial support from all levels of government.

Should you have questions regarding this submission, please contact Adrienne LaBombard, Director – Policy and Advocacy, on 0400 912 525 or at A.LaBombard@cmewa.com.

Yours sincerely,



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⁶⁰ United States Environmental Protection Agency, [FAST-41 Coordination](#), 11 September 2023.

⁶¹ United Kingdom Government, [UK Battery Strategy](#), Department for Business and Trade, 26 November 2023. United Kingdom Parliament, <https://committees.parliament.uk/publications/42201/documents/209779/default/>, 21 November 2023