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Re: AusIMM response to Australian Critical Minerals List

Thank you for the opportunity to respond to the Australian Government's review of which elements, metals and minerals should be on the nation's Critical Minerals List.

The list must be broadened to meet the four very clear objectives the Government has set through its review and refresh of the nation's Critical Minerals Strategy:

1. Create diverse, resilient and sustainable supply chains through strong and secure international partnerships
2. Build sovereign capability in critical minerals processing
3. Leverage our natural critical minerals endowment to help Australia become a renewable energy superpower
4. Extract more value from our resources onshore, which creates jobs and economic opportunities, including for regional and First Nations communities.

The AusIMM recommends the Government broaden the list, not constrain it, and grasp a once in a generation opportunity to ensure Australia plays a clear strategic role supplying the world with raw, processed and value-added minerals and metals to deliver global supply chain resilience, support decarbonisation efforts, and drive a new era of downstream manufacturing capacity and domestic sovereign capability.

As Resources Minister, Hon. Madeleine King has said: *"Without mining, the world cannot reach net zero by 2050. In fact, the minerals required to achieve our decarbonisation goals are of such magnitude that to reach net zero, we will need more mining, not less."*

Australia's strategic and international trading partners, under a range of critical mineral lists, have identified major global supply risks. **If Australia's major strategic partners and resource competitors have put aluminium, copper, nickel and zinc on their critical mineral lists, so should Australia to position itself as the world's reliable, strategic and environmentally leading supply source partner.**

Australia should resist the temptation (and the risk) of overcomplicating the creation of a bespoke or subset of raw materials, strategic metals, or critical mineral lists.

We recommend the Critical Minerals List include:

- bauxite, alumina, aluminium - to build on Australia's manufacturing potential and deliver aluminium used in batteries, solar panels, wind turbines, transmissions lines;
- copper, manganese, nickel, zinc - to drive production of batteries to be a renewable energy superpower; and
- potash and phosphates - to secure national food production and supply.

In support we note:

- DISR has identified 81 critical minerals projects¹ totalling almost \$40 billion including lithium, nickel, cobalt, tungsten, and high-purity alumina.
- CSIRO's Critical Mineral's Roadmap² includes aluminium, nickel and copper.
- NSW Government's priority [list](#) includes high-purity alumina, copper, nickel.

¹ Department of Industry Science and Resources, [Resource and Energy Major Projects 2022](#), Page 13-14

² CSIRO, [Critical Energy Minerals Roadmap](#).

Expanding the list will send a clear and unambiguous message to:

- The nation, to **secure new opportunities** (be they lithium or zinc-based batteries) and renew its **support for existing processing** (aluminium, copper, nickel and zinc refining and smelting);
- International partners, that Australia is open for business and investment;
- Regulators, in particular state governments, to advance and streamline approvals; and
- The broader community, that Australia will look to capitalise on its natural resource advantages and focus its R&D efforts to drive national prosperity.

The national Critical Minerals List should not be about constraining Australia's potential to fit current Critical Minerals Office (CMO) funding, but to leverage opportunities at all levels, both federal and state, utilising public and private finance.

Broadening the critical minerals list to include metals such as aluminium, copper, nickel and zinc will not necessarily lead to every project, proponent or business seeking direct funding support via CMO. That is why the government has a range of funds, plans, and initiatives in place including supporting critical minerals and associated manufacturing opportunities such as:

- \$15 billion National Reconstruction Fund
- Australian Made Battery Plan
- National Electric Vehicle Strategy
- National Hydrogen Strategy
- Powering Australia Plan
- First Nations Clean Energy Strategy.
- And why state governments such as NSW have the High-Tech Activation [Fund](#).

The consultation paper seeks views on whether Australia can learn from its US, UK and EU partners and if some elements should be deemed as critical minerals or critical raw materials, or critical energy minerals (or critical materials for energy) and if some should be added to a "watch list".

We suggest it is splitting definitional hairs to separate, as the EU does, 34 Critical Raw Materials³ (which includes copper and nickel) and 16 Strategic Raw Materials (which includes battery grade nickel). To create a list stratifying the relative importance across the chain of a raw material from its source (e.g. nickel ore) to intermediate products (nickel matte) to battery chemical (nickel cobalt sulphate) could be viewed as overly specific and complicated to monitor or administer – when using the word 'nickel' on one list would suffice.

We therefore urge governments to resist the risk of overcomplicating a practical public policy tool that critical minerals are by their very nature - critical. They are:

- critical to leading the energy transition (aluminium, copper, cobalt, nickel, lithium, zinc, RREs);
- critical to delivering lower emissions manufacturing (e.g. high-purity alumina, carbon-free aluminium smelting);
- critical to the strategic and defence applications (e.g. aluminium, tungsten, etc);
- critical for electronics, medical and IT sectors (e.g. RREs, PGMs); and,
- critical to sustain food production (e.g. phosphates).

A consistent and simple list for Australian governments (both federal and state), their legislators and regulators, financiers and communities, should be the overarching goal.

Our specific response to your consultation questions follows.

Yours sincerely,
AusIMM

³ EU, [Critical Raw Materials](#)

AusIMM Specific Response to Consultation Question

Q1) Is the current criteria still fit for purpose? The list currently includes minerals:

- *essential to modern technologies, economies and national security*
- *whose supply chains are vulnerable to disruption*
- *that our strategic partners need; and*
- *for which Australia has potential economic geological resources.*

Answer – No. The criteria should also include:

- harnessing the nation's research and development activities, and
- building on Australia's existing chemical, metals and minerals processing expertise

Q2) For minerals that are currently on the list, or minerals that should be considered for addition to or removal from the list: (a) Which technologies does the mineral feed? (b) What evidence is there of supply chain disruption relating to those minerals? (c) What market, financing, technical or other barriers affect these supply chains? (d) Are the barriers or supply chain disruption risks more acute in certain applications or levels of mineral grade or purity than others?

Answer - We recommend the government not overly complicate the creation of a Critical Minerals List by seeking to stratify the relative importance (or risk) across the value chain of a raw material from its raw source (e.g. nickel ore) to intermediate products (nickel matte) to processed product (nickel sulphate and cobalt sulphate used in battery cathode production). We recommend government not overcomplicate and separate, as the EU does, between 34 Critical Raw Materials (which includes copper and nickel) and 16 Strategic Raw Materials (which includes battery grade nickel).

Q3) Should Australia differentiate between criticality or importance of minerals, and the capability to process them, through categories within the list or a separate category that sits alongside the list? This differentiation could reflect the size and maturity of markets and the different challenges or barriers faced.

Answer – No. To define criticality in purely local terms of being capable of being processed in Australia would miss the important strategic and globally integrated role Australia can play in the value chain of the extraction, beneficiation, processing or full production of an element. Seeking to define a product, by either barriers to entry or market maturity, could have the unintended consequence of 'sidelining' the metals, minerals and assets (smelters and refineries) that could best leverage Australia's geological endowment and its existing chemicals and metals processing expertise (e.g. bauxite, aluminium, nickel, zinc).

Q4) What lessons could be learned from other countries' approaches or the ways in which they consider their criteria for listing critical minerals?

Answer – The US Critical Mineral list is among the most comprehensive (including aluminium and zinc), while the Canadian list (which includes aluminium, copper, nickel and zinc) is clearly framed with a view to building on its downstream processing and manufacturing strengths. In a world of competitive asset allocation and capital flows, Australia's list should also have a clear strategic frame to leverage and build upon Australia's existing processing expertise in aluminium, copper, zinc, nickel and growing acumen in lithium, RREs.

Q5) What should trigger an update to the list? For example, global strategic, technological, economic or policy changes.

Answer - Global strategic supply chain shifts and global government policy should be key considerations. Should a mineral, metal, or element not be on the Australian list, industry should also be able to request a review providing supporting evidence for this review to take place.