

To: Commonwealth Treasury

Re: Critical Minerals Production Tax Incentive consultation

12 July 2024

Introduction

AMEC appreciates the opportunity to provide feedback to the Commonwealth Treasury regarding the formulation of the Critical Minerals Production Tax Incentive. The ability to discuss the framing of this consultation has been welcome, and the openness of Treasury and Department of Industry, Science and Resources (DISR) to meet with Industry has been appreciated.

Globally, virtually all critical minerals are currently processed in China and East Asia. Internationally, following the height of the global COVID-19 pandemic, many nations engaged a raft of incentives to attract global capital to diversify supply chains and to decarbonise their economies. With Japan, Korea, England, the EU and the United States of America each adopting measures to make it increasingly attractive to invest there. Industry feedback to AMEC has been these incentives are demonstrably reducing Australia's competitiveness in attracting mobile capital. Australia still has a nascent critical minerals industry, and the competitive advantage of hosting the deposits may not suffice to entice downstream development.

Against this backdrop of increasing global competition, the consultation on the Production Tax Incentive arrives just in time. The USA's Inflation Reduction Act (IRA) in particular has been identified as globally shifting investment in downstream processing of critical minerals to the US and away from Australia. The 10% Advanced Manufacturing Production Tax Credit (AMPTC) component of the IRA reduces operating costs in the US for eligible projects is comparable to the proposed Critical Minerals Production Tax Incentive. A Critical Minerals Production Tax Incentive will reduce the production cost disadvantage faced by Australian projects. It is however, not a "silver bullet" or panacea: Australia has long approvals timeframes, fundamental land access issues and high construction costs. Industry has noted a high cost disparity between the Australian and international approvals processes as well as expressed frustration at immature common-user infrastructure and utilities services. A CMPTI cannot surmount those challenges, but it will make the cost of doing business, once in production, more competitive.

AMEC's commentary should be considered in light of the Production Tax Credit report that was supplied into the Commonwealth Budget process. This document is available on AMEC's website at: www.amec.org.au/ptc. This report and reflects the wider membership's concern that unless the Commonwealth Government seriously engage, Australia will be caught flat footed and miss opportunities to expand further downstream.

About AMEC

The Association of Mining and Exploration Companies (AMEC) is a national industry association representing over 580 member companies across 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 2022-23 Industry generated a record high \$466 billion in resources exports, invested \$4.27 billion (CY2023) in exploration expenditure to discover the mines of the future, and collectively paid over \$63 billion in royalties and taxes.

AMEC represents companies pursuing all of the different types of critical minerals in production or moving downstream in Australia across all jurisdictions.

Framework

General remarks

A Future Made in Australia' legislative framework is intrinsically linked to the mining and exploration sector, with Australia's vast critical minerals holding the key to a decade of greater opportunity. The Critical Minerals Production Tax Incentive (CMPTI), alongside needed approvals and cost of business reform, will drive Australia downstream.

As already stated, the CMPTI is needed as Australia faces stiffening global competition for mobile capital. Unless something is done, Australia will not realise potential future opportunities further downstream.

An unavoidable reality is that the global demand for critical mineral is constantly shifting. There are new technologies entering the market, new demands and new minerals growing to prominence. Simultaneously, fierce competition between battery manufacturers means the demanded minerals and chemistries are also evolving. Strong and consistent Industry feedback has been that the implications is that end uses, such as battery chemistries, will continue to shift, rendering it extremely challenging to predict what upstream saleable input products will be in demand in 2030 and beyond. The drafting of the CMPTI must be flexible enough to shift with the market.

The following commentary is provided based on feedback from AMEC's members through engagement over the two-week consultation period. It must be acknowledged that the consultation occurred over the school holidays, and many that would usually engage were not available.

AMEC would welcome the opportunity to provide further context and discussion with each of the questions below and facilitate Government meeting with key members who are invested in pursuing a Future Made in Australia.

Questions

1. Please provide any feedback on the proposed eligibility criteria.

How the eligibility criteria for the CMPTI are set will define the effectiveness of the incentive to achieve the intended outcomes of making a Future Made in Australia. The intentions of the Future Made in Australia being for Australia to produce more downstream product.

The current eligible mineral output document provided has simple definitions based on flat purity rates that in some cases will be difficult to achieve. Setting the eligible output in this manner could have the unintended consequence of discouraging investment in downstream processing given the up-front costs required to build processing capability under the CMPTI.

Industry has also noted that the assumption that frame the purities assume certain technologies. Technologies will hopefully change and improve. The CMPTI needs to be flexible.

Feedback from Industry also states that provision is needed for unincorporated joint ventures (UJVs) to be an eligible entity, not just Australian corporations. UJVs are a common structure used in the Australian resources sector. UJVs are contractual arrangements that allow individual UJV “participants” to share in the “product” (as distinct from the “profit”) of the venture.

A UJV is common and well suited to mining and resources projects as the product from the project mine can be appropriated by each individual participant and taken or sold into the market, allowing each individual participant to account for its own profit.

The provision to allow for foreign investment into Australia is welcomed, noting that the two lithium hydroxide facilities built already on Australian soil are done so thanks to substantial foreign investment. Noting that this provision acknowledges and aligns with Australia’s preexisting foreign investment settings such as and including the Foreign Investment Review Board’s role in current arrangements.

Industry has noted that ensuring the technology and facilities are built here, rather than elsewhere is key. The clear statement of building in Australia as a criterion is sensible and welcomed.

The allowance for both existing and new facilities to benefit from the CMPTI is equitable. While not an eligibility criterion, it should be noted that the proposal to not cap or time limit the provision of the CMPTI has also been welcome. The first movers have received no government support in its multi-billion investment that aligns with government vision and strategy.

The timeframe for achieving Final Investment Decision is of concern. Noting that the definition of FID is handled in Question 2, the restriction to all projects that reach FID prior to 30 June 2030 ignores the long and challenging gestation critical minerals projects can have. Attracting the necessary billions of dollars to construct a downstream facility or to achieve environmental approvals are both challenging.

If a critical minerals deposit was discovered today, and it progresses at the speed of an ordinary mine it will take on average 16 years for that deposit to become an operating mine. Downstream processing is many orders of magnitude more complicated than mining. Particularly as the critical minerals downstream processing that is eligible for this tax incentive is with a couple of exceptions (lithium and nickel) not occurring in Australia. It must be acknowledged by Government that the CMPTI is eligible for companies that are close to mining or are actively considering downstream processing now.

On page 4 of the Consultation Paper reference is made that if a new critical mineral was included onto the critical minerals list it would not automatically be eligible for the Critical Minerals Production Tax Incentive. This appears inconsistent with the policy intent of the Government to incentivise the downstream processing of minerals on the critical minerals list. Industry would assume the Government is discerning as to which minerals are included on the Critical Minerals List, and if a new mineral is included then it would be eligible. When drafting the legislative framework making provision for the Treasurer or Resources Minister to include minerals would be welcomed.

Similarly, there is apprehension within Industry as to what will occur if the converse occurs: that is a critical mineral is struck from the list. Will the Commonwealth Government strive to claw back the funding? A removal from the list would substantially rework the financing assumptions for projects invested on that minerals list inclusion. A ‘no fault’ approach to a mineral’s removal from the list, would mean that companies could rely on the funding as was committed for the defined period.

The Consultation paper is silent on the status of the minerals of the Strategic Materials List, but it is implied that they do not receive the Critical Minerals Production Tax Incentive. Clarifying the purpose of that list is a separate, but related, policy issue that companies invested in those minerals would welcome.

2. What key factors would need to be accounted for in a definition of Final Investment Decision (FID) for the purposes of the CMPTI?

The term Final Investment Decision (FID) is not a legislatively defined term in Australia. The FID is generally understood as the decision point where a project transitions from the planning and feasibility stage to the construction and execution phase. The FID is a milestone that is announced to the market and marks the successful completion of both financing and approvals.

As multiple companies invested in downstream critical minerals have shown securing financing to begin production is a lengthy process. Some companies have spent over a decade compiling the funding and financing. This is due to three main reasons: the projects are complex; the quantum of funds needed (often in billions of dollars); and the reality that the companies taking up the challenge of critical minerals downstream are (mostly) many orders of magnitude smaller than the dollars being sought.

Key factors that need to be achieved for FID are the following:

- Confirmation of sufficient conditional financing to begin construction
- Preliminary Design and associated costings
- The primary State approvals (i.e. tenure and environmental approvals)

A fully endorsed Board or Shareholder endorsed Minute addressing the three tests above would provide sufficient evidence of having reached FID as defined by the CMPTI.

3. How long do you expect it will take for processing and refining facilities to reach first production following FID?

This is a difficult question to provide a single answer to as it will vary for each mineral and the circumstances of the project. The underlying assumption being that the commencement of the processing facilities will be seamless. Often, particularly with nascent and untested technology the commissioning of a new facility has many challenges, cost over runs and delays. To downstream process most critical minerals, Australia will be attempting to move downstream and develop projects that have not been built outside of China, for the first time. Companies that go downstream in Australia take on substantial risk and forgo an easy profit of shipping the unprocessed product. Australia lacks developed Strategic Industrial Areas (SIA), as most proponents have had to negotiate headworks for basic utilities (power and water) which have contributed to lengthened timeframes. Some proponents have had to undertake a full environmental approval for a development that has occurred entirely inside the envelope of the SIA, which have also contributed to extending the timeframe.

As noted earlier, the CMPTI will make Australia more competitive. However, there are substantial other reforms including environmental approvals and the development of 'plug and play' SIA's that could streamline the development timeframes.

It should also be noted that "first production" needs to be defined. It should be after plant commissioning. At this stage it is likely that the plant will not be at full or economic production levels and undertaking commissioning. With new technologies it can take some time to ramp up to the design throughput, recovery or cost structure.

Eligible Processing Expenditure

4. Please provide feedback on the proposed eligible expenditure.

The five categories identified of reagents and other consumables, labour, utilities, maintenance, and logistics/transport are supported by AMEC as a minimum.

General Administration needs to be included as specific eligible expenditure. It would be able to be apportioned accordingly as per a justified rate.

Waste needs to be included. Downstream processing is not possible without creating a waste stream. The management of that waste in a socially (and Australian environmental regulatory) acceptable manner incurs a cost that is a factor in the decision to go downstream or not. All of the costs associated with the waste expelled from the processing facility should be in consideration.

Industry has noted that in the Petroleum Resource Rent Tax (PRRT) that the Native title payments to landowners are deductible to the extent they are liable to be made in relation to securing access to land for the operations, facilities and other things comprising a petroleum project. Similar to the PRRT, we would suggest the compensation payments to certain parties for carrying on or providing (in an area) the operations, facilities or other things comprising a project are deductible as eligible real expenditure. The parties are included native title holders; native title claimants; and people who hold a right (under an Australian law dealing with the rights of Aboriginal and Torres Strait Islander people in relation to land and waters).

There has been some discussion amongst industry as to the need for depreciation to be included either the CMPTI or in a separate model.

Including some, or all, of the depreciation would allow the deduction of costs from the capital invested and reduce the substantial capital hurdle faced by companies. It would also increase the cost of the CMPTI to the Government. However, given the relatively small number of companies that are going downstream, the Government should consider including depreciation. This would align with the Modified Accelerated Cost Recovery System (MACRS) in the USA, which introduces 'bonus depreciation' for certain eligible companies. Consideration of depreciation would also be a step toward addressing an acknowledged drawback with Australia compared to other international jurisdictions: high construction costs.

5. Please provide feedback on where you draw the line between mining and primary processing and mid-stage processing.

Primary processing is crushing and screening/resizing of products which change the physical characteristics of the minerals. Critical minerals that undergo improvement or value-adding through physical processing is known as beneficiation. This includes the removal of deleterious elements.

All some feedstock is not "raw material", as spodumene that is mined is the raw material then organisations. An example is lithium spodumene concentrate SC 6.0. A distinction should be made between 'feedstock ore' (ore which has been extracted, undergone primary crushing and screening etc = resizing) - which shouldn't be included - and that has undergone mid-stage processing into 'feedstock ore concentrate,' (some impurities removed) which should be included.

Industry has noted that there should not be considered a 'given' that miners will process ore into a concentrate and not export DSO immediately. Noting that there is a sometimes lucrative market for spodumene. The value differential is significant, and the intent should be to support value-add in Australia. There is a cost associated with this downstream processing, but it adds value.

The line between primary processing, and mid-stage processing, is at the point of chemical change – with some notable exceptions (graphite for example, which undergoes a morphology change). Once a chemical change to the material is rendered then the raw critical material ceases to exist, and new downstream products emerge. A definition we can apply here is a chemical change will occur if the product undergoes one of the following 3 processes:

- Hydrometallurgical
- Electrochemical
- Pyrochemical

If Australia were to adopt chemical change as the “line” where the processing change occurs it would align with the USA Advanced Manufacturing Production Tax Incentive (AMPTI). As is proposed in IRS Code § 1.45X-1(c)(2)(i) would provide that for purposes of section 45X, the term “conversion” means a chemical transformation from one species of mineral to another. There are a few critical minerals where this does not apply: graphite does not undergo any form of chemical transformation – it remains graphite throughout.

The definition of a chemical transformation is well suited for the legislative framework but may, but for the guidance and practical operation specification is sought.

A system that is commonly used by industry is the Harmonised System or HS code. HS codes are recognised internationally for the import and export of traded products. It is used by countries around the world to uniformly identify and describe products for purposes such as assessing duties and gathering statistics¹. HS Codes could be used to determine what products qualify for the CMPTI as the coding covers all phases of processing. For example, Nickel Sulphate and Nickel Chlorite are subject to changing customer demands but would both be captured under “[HS Code 75012000 - Nickel oxide sinters and others](#)”.

6. Are there any competitive neutrality considerations to ensure the CMPTI treats different projects fairly and does not distort commercial decision-making? For example, how should capital costs for power generation be treated for facilities that produce their own power?

The intent of the CMPTI is that it does affect commercial decision through reducing the risk to the establishment of the industry. However, industry recognises that ultimately these facilities will need to operate profitably without the CMPTI and hence capital versus operating costs decisions will be unlikely to be influenced by the 10% CMPTI.

In the example of power supply most value adding facilities are likely to be in industrial centres and hence will either be supplied through the grid or through a Power Purchase Agreement with a third party.

In the event of a dedicated power facility owned and operated by the principal at the value adding site there would be a case for recovery of depreciation. This could be through establishing a separate entity that acted as a power provider.

It has been discussed by Industry that Government’s concerns further enhance the need to appropriately consider an allowance linked to capital costs. Whether it is a measure with depreciation

¹ [Harmonized System \(HS\) Codes](#)

or some other percentage of eligible capital expenditure, such as accelerated depreciation. Such a provision may potentially ensure fewer distortions between commercial decisions.

Similar to power facilities, gas transmission may also apply. Noting that it is highly unlikely that a mining and processing company would deploy a large amount of capital to build a greenfield gas transmission pipeline. Instead, the company would enter into a long-term take-or-pay contract with a specialist pipeline operator.

AMEC and Industry will welcome future consultation on these considerations.

7. What, if any, transport costs should qualify? How could a sensible boundary between eligible and ineligible transport costs be drawn?

Transport costs exist for all operations. For most critical mineral's products, the proportion of transport as a cost is much smaller than for bulk products, such as iron ore. However, nearly all Australian mines are in remote and regional Australia and moving the feedstock, reagents and chemicals, as well as the waste to and from the processing facility are a consideration.

Transporting the feedstock, reagents, ingredients, and materials to site for undertaking downstream processing should be eligible.

Transport of the product to the point of sale should be included. That may be to a port and onto a ship within Australia. Any costs associated with transport beyond the Australian shores could be excluded.

8. What reagent costs should be eligible?

All reagents should be eligible.

Listing the reagents varies for each ore being downstream processed will be difficult to absolutely define as that presupposes the feedstock, the technology and the technique(s) used. Noting that reagents and utilities are not the only two costs centres that are present for downstream processing.

Coating agents should also be explicitly included, which are used in downstream processing of graphite. As discussed, graphite does not undergo a chemical process when stepping down the value chain.

This can be clearly seen in the example from lithium spodumene to lithium hydroxide provided below.

Stage	Significant Cost Contributor	
Calcination		<ul style="list-style-type: none"> · Spodumene concentrate (including logistics) · Natural gas · Labour · Electricity · Maintenance · Water · Ancillary treatment · Grinding media · Mobile Equipment including fuel
Acidification		<ul style="list-style-type: none"> · Sulphuric Acid · Natural gas · Labour · Maintenance · Water · Ancillary treatment · Mobile equipment including fuel
Leaching		<ul style="list-style-type: none"> · Lime

		<ul style="list-style-type: none"> ·Limestone ·Labour ·Electricity ·Maintenance ·Water ·Ancillary treatment
Filtration		<ul style="list-style-type: none"> ·Lime ·Limestone ·Labour ·Electricity ·Maintenance ·Water ·Ancillary treatment ·Mobile equipment including fuel ·Co-product transport and disposal
Caustisation		<ul style="list-style-type: none"> ·Caustic ·Electricity ·Steam ·Water ·Labour ·Maintenance
Crystallisation		<ul style="list-style-type: none"> ·Electricity ·Steam ·Water ·Labour ·Maintenance
Purification		<ul style="list-style-type: none"> ·Electricity ·Steam ·Water ·Labour ·Maintenance ·CO2
Packaging		<ul style="list-style-type: none"> ·Labour ·Packaging materials (bags, pallets, wrap) ·Electricity ·Maintenance ·Water ·Mobile equipment
Logistics		<ul style="list-style-type: none"> ·Mobile equipment ·Labour ·Distribution (warehousing, logistics, administrative)
Other		<ul style="list-style-type: none"> ·Labour ·Administrative costs

This array of inputs are required to take spodumene to lithium hydroxide monohydrate. The reagents will differ for different minerals and flowsheets. Some reagents may also be confidential due to proprietary technology in extracting the downstream product, and provision should be made to ensure this confidentiality.

There are future technologies and innovations that will occur that will amend the list of the reagents that are used. The drafting of the CMPTI should avoid specifying the list too narrowly, as it will inhibit the metallurgical innovation that will occur.

9. What costs associated with the treatment, enrichment or disposal of waste should be included? Why?

All costs associated with the treatment, enrichment and/or disposal of waste from the downstream processing unit should be included. This should not distinguish as between capital or operating costs. A proponent building a downstream facility has no choice but to manage the waste produced. Waste may be minimised but cannot be avoided: it is an outcome of the processes to downstream minerals. The waste created by undertaking downstream processing of critical minerals is also a prescribed and regulated activity under both the State and Commonwealth legislative frameworks.

Waste must be managed and is a cost. It has been noted that it would be inconsistent with the Commonwealth Government's environmental legislative reform agenda to not facilitate best practice of waste management through the CMPTI.

The inclusion of waste will also align with both the Commonwealth and State's intentions to promote a "circular economy".

More broadly than waste, under the Income Tax Assessment Act 1997 capital costs associated with rehabilitation and environmental protection activities are often immediately deductible, and as such any capital costs associated with these activities should also be eligible and included.

10. What structures are likely to be adopted in critical minerals processing that could give rise to related party transactions? How should related party dealings be treated under the CMPTI?

As the feedstock and financing is excluded and the CMPTI is not income based, the related party transactions will largely be limited to the provision of services. It is assumed that the Government's concern is that the service provider will inflate the cost to their related party. While some in Industry have questioned the benefit, as the CMPTI will supply a 10% credit on the total cost.

There are existing principles relating to the need for clear arm length transactions and there is a framework that could be considered for under existing the transfer pricing regimes or internationally established arm's length pricing principles. It is not unusual for different parties to have interests across the value chain.

Industry has noted this could be considered as potentially applying to tolling facilities. Given that both the Commonwealth and State Governments have worked hard to create common user downstream processing facilities, if the CMPTI incentivises such practice it would be highly beneficial to the wider market. It should not be excluded from receiving the CMPTI.

Industry also anticipated that the tax consolidation rules will need further thought as to where facilities in the value chain are owned by separate legal entities but are part of the same tax group. Further consideration and consultation would be welcomed.

11. What intellectual property (IP) arrangements are adopted by critical minerals processors? What treatment should apply to the payment of royalties? What measures could be put in place to manage integrity risks?

Intellectual property (IP) arrangements exist for several technologies used in certain minerals, and costs are proportionally very small. Each IP arrangement surrounding the use of a technology has a specific agreement that sets out the terms and conditions, and importantly the fees and charges. Many IP arrangements have a fixed fee and proportional arrangement. Industry has suggested that the IP arrangements are done on an arm's-length basis. Contractual evidence can be provided of this arm-length nature, and the costs of IP royalties should be treated as a cost of doing business and downstream in Australia.

Industry has noted that existing integrity provisions or concepts within the tax legislative framework (e.g. anti-avoidance provisions, arm's length pricing principles) could be utilised to ensure administrators have appropriate means to deal with integrity concerns.

Eligible Outputs

Comments on Eligible outputs.

Alongside the consultation paper, the Department of Industry, Science and Resources (DISR) and the Commonwealth Treasury circulated a document detailing potential thresholds for qualifying eligible outputs (the document).

Some of the purity levels set in the document in this initial discussion phase will have the unintended consequence of ensuring no new downstream lithium processing in Australia would be possible.

On page 6, the Consultation Paper proposes an eligible output as one that has "a minimum purity of 99.9% lithium by mass." No existing facility under development nor planned lithium processing plant in Australia produces almost pure lithium. For example, the final product at Albemarle's Kemerton lithium hydroxide facility south of Perth is lithium hydroxide monohydrate (LHM). It has the chemical formula $\text{LiOH}\cdot\text{H}_2\text{O}$. Whilst generally known as lithium hydroxide, it is only ~56.5% lithium hydroxide (LiOH). It must be 98.9-99.9% LHM (not pure lithium) to be considered battery grade and saleable. Eligible output might be better defined by referencing a market, an arms-length sale of the product to the battery or EV manufacturer. A product that does not meet the battery or EV manufacturer's specifications will not be sold. The design also needs to be careful not to lock out technology or innovation, which is the risk associated with hard thresholds.

The current drafting for the CMPTI proposes that nickel sulphate, with an average ~22% nickel content, be eligible. Whereas Mixed Sulphide Precipitate produced from the Kalgoorlie Nickel Project – Goongarrie Hub for example, is expected to be ~60% nickel, will not. This is an illogical and unintended consequence that must be addressed.

If the aim is to incentivise a critical mineral industry to move downstream, the principle of government should be not to set the walls too high on eligible outputs to discourage investment. As a general principle we see any move to improve raw material to the point of 'next saleable product' should be incentivised under the CMPTI. Incrementally moving down the supply chain lets business build the downstream capability as our capability improves.

For example, by allowing other lithium chemicals such as lithium sulphate to be eligible will align it with the government's stated policy intent of value adding to critical mineral resources extracted in Australia and improve our economic security through a more resilient critical mineral supply chain thus making us a more significant player in the renewable energy industry.

Incremental movement down the supply chain also complements other strategies in place such as the WA Battery and Critical Mineral Strategy. Alignment with State Governments who are also trying to do the same thing by attracting downstream investment with the policy levers at their disposal ensures a greater chance of success in building an Australian downstream critical mineral industry.

For example, changing the settings for lithium to include lithium sulphate will not, we consider, have an adverse effect on the policy. This is because in the lithium space, there are not many lithium mines to enter production in Australia over the next decade as it stands today. By including lithium sulphate does not increase the players that will utilise the CMPTI but merely ensure those with an interest in moving further downstream will look at Australia as a viable option in their decision making.

It has also been noted by Industry that many of the 31 critical minerals in Australia are not being pursued by any companies currently. Consequentially a broad categorisation of 99.9 content by mass rate has been identified. This may be too high, however these future users of the CMPTI do not have anyone sufficiently informed to provide feedback and context to the realism of such numbers. However, as noted earlier given the timeframes around Final Investment Decision, unfairly disadvantaging these future users is an unintended consequence this is less likely to occur.

Continuing to work closely with industry on a mineral-by-mineral basis on settings around eligible outputs is crucial. If not set correctly, or if too prescriptive, Australia will not add to its downstream capability for each mineral.

This document will be commented on separately by AMEC with its own discrete and detailed submission to be provided at the end of the month.

12. Which critical minerals are currently processed in Australia? To what grade?

An extract of the Critical Minerals list published by the Department of Industry, Science and Resources² is shown below. The minerals where there are no economic resources are unlikely to be developed in the near future.

The 2022 production data shows those minerals being produced at that time. Not all of the projects would have had a value adding step that would be eligible for CMPTI.

The grade being produced would be highly variable and that data is not readily available.

Critical mineral	Australian geological potential[7]	Australian economic demonstrated resources (2022)[8]	Australian production (2022)[9]
High-purity Alumina	High	HPA ore:[12] 16,700 kt	0
Antimony	Moderate	139.4 kt	2.3 kt
Arsenic	Moderate	No data	No data
Beryllium	Moderate	No data	No data
Bismuth	Moderate	No data	No data
Chromium	Moderate	0	0
Cobalt	High	1,742 kt	5.8 kt
Fluorine[13]	Moderate	343 kt	0
Gallium	High	No data	No data
Germanium	High	No data	No data
Graphite[14]	Moderate	8,500 kt	0
Hafnium	Moderate	14.5 kt	No data
Indium	Moderate	No data	No data
Lithium	High	7,046 kt	75 kt
Magnesium	High	Magnesite: 284,000 kt	Magnesite: 500 kt
Manganese	High	Manganese ore: 496,000 kt	Manganese ore: 4,500 kt

² <https://www.industry.gov.au/publications/australias-critical-minerals-list-and-strategic-materials-list>

Molybdenum	Moderate	687 kt	0.28 kt
Nickel	High	24.1 Mt	0.15 Mt
Niobium	Unknown (interpreted moderate)[15]	216 kt	No data
Platinum-group elements[16]	Moderate	359.3 t	0.492 t
Rare-earth elements[17]	High	5,700 kt	16 kt
Rhenium	Unknown (interpreted moderate)	157 t	No data
Scandium	High	36.65 kt	0
Selenium	Unknown (interpreted moderate)	No data	No data
Silicon	High	No data	No data
Tantalum	High	110 kt	0.1 kt
Tellurium	Unknown (interpreted moderate)	No data	No data
Titanium	High	Ilmenite: 303,300 kt	Ilmenite: 700 kt
		Rutile: 39,000 kt	Rutile: 200 kt
Tungsten	High	568 kt	0.23 kt
Vanadium	High	8,510 kt	0
Zirconium	High	Zircon: 88,300 kt	Zircon: 500 kt

AMEC will provide Treasury with a further submission with greater detail on known projects being undertaken in certain critical minerals in Australia. Noting that the Department of Industry, Science and Regulation is assumedly already tracking this data.

13. Of Australia's 31 critical minerals, what are the current common market requirements for processed outputs?

Not all 31 minerals are produced or likely to be produced in Australia.

Where the minerals are processed through a value adding process they are produced to quality specifications nominated in the sales contracts. These are variable between process and potentially between customers. The specifications would typically include a minimum and ranges with penalties and premiums.

Critical minerals are not commoditised and there is not a common market standard. There is no simple answer like precious metals where the London Precious Metals Market sets a clear benchmark of what is a gold bar, and then an internationally tradeable commodity.

In many cases, the customer specifications do not rely on the percentage purity, but the absence of specific impurities that impact the technology application. For example, some customers would prefer a lower-grade (lower purity) product if certain impurities are not present in the product. Conversely, a higher purity product with adverse impurities would be less desirable and lower value.

Rapid technological developments also make it difficult to outline common market requirements. As battery chemistry evolves, so do the customer specifications.

The inability to answer this question simply reflects the opacity of critical minerals markets, and is an aspect of why it is a challenging area to work in.

14. What is the form of the raw critical mineral when it arrives at your facility and what is its state when it leaves your facility?

Most raw critical minerals are in their mined form from a chemical perspective. In many cases after mining the critical minerals will have been concentrated through a beneficiation process such as flotation or dense media separation.

The product being produced by the facility will have undergone a chemical change in the form of the critical mineral.

However, as discussed above, there is an argument from the industry that spodumene concentrate may be considered as an exception. It has been more than mined before it reaches the facility; it has had some impurities removed and concentrated, taking its lithium content from ~1.5% to 6% and significantly improving its value before it arrives at the facility.

15. Can you provide details on the full workflow process to convert the raw critical mineral to the end product(s) in your facility? Does the workflow process involve beneficiation?

Appendix 1 has several example flowsheets for different minerals – this is by no means comprehensive or sufficiently detailed for consideration by the CMPTI. AMEC recommends for a more detailed conversation the Government speak directly with the limited number of companies undertaking downstream processing in Australia.

Some work flows involve beneficiation. Beneficiation is a process by which valuable constituents of an ore are concentrated by means of a physical separation process, and by way of flotation. This is before, what we consider the critical hurdle, the chemical transformation process.

16. What are the associated costs (e.g., reagents and consumables, labour, utilities, maintenance, logistics/transport, waste, etc.) for each processing stage undertaken in your facility?

AMEC is willing to facilitate the Treasury to meet separately with individual companies who are undertaking processing to seek this information under a nondisclosure agreement. These costs are generally commercially sensitive. Given the diversity of potential critical minerals downstream projects generalisation is unlikely to be useful or provide an accurate basis for assessment.

17. Does the end product undergo any further processing after it leaves your facility? Can you provide more details regarding the next steps and/or process?

Virtually all critical minerals products will undergo further processing when they depart the Australian facility. There are exceptions of course: in the downstreaming of Vanadium where Australia has the potential to produce all of the electrolyte and componentry to domestically manufacture vanadium flow batteries. Graphite may also present a product with sphericalisation being potentially undertaken in Western Australia and South Australia.

18. To what extent are different minerals processed together e.g., from the same raw material? What considerations does this give rise to for the application of the CMPTI?

The creation of by-products can be common for certain minerals. However, it should be incentivised to align with the underlying objective of downstreaming more minerals in Australia. The treatment of

apportionment should be able to consider this. Noting that down streaming different critical minerals will demand differing plant and equipment, due to the specialised nature of going downstream for each product. For example, nickel sulphate will have its own processing unit and a cobalt credit, which will be processed together to a point and then they will be separated.

All costs should be eligible for downstream processing if two end products are being produced until the point of separation, even if one product is not a critical mineral.

Rare Earth Elements are commonly processed together and grouped as a product (HS Codes section discussed in Question 5).

19. What is a sensible approach to apportionment of mixed-use costs?

Depending on the location of the downstream processing there may be mixed use costs. For example, if the processing were to occur upon a mine site, the split between costs that are incurred between mining and processing phases of the value chain will need to be undertaken for a number of items (e.g. power generation, accommodation facilities etc). Industry understands that it is fair that a proponent would only claim a deduction under the CMPTI to the extent that the expenditure has been incurred on CMPTI activities.

In the broader tax law and administrative guidance issued by the ATO there are already a number of concepts which allow for the apportionment of costs as between different activities. For example, in mining projects there is ATO guidance on apportionment of costs as they relate to exploration deductions vs other expenditure. Noting that in a cross border context, there are also transfer pricing principles that deal with pricing non-arm's length transactions that could provide an analogue.

There is not a single unified industry perspective on how apportionment of mixed use costs should be addressed. As the Government would be aware there are methods of apportionment in the Research and Development Tax Incentive and Petroleum Resource Rent Tax (PRRT) and previously under the Mineral Resources Rent Tax that each have different methods depending on the nature of the expenditure.

For example, under the Research and Development Tax Incentive provides discernment for a company to determine their apportionment methodology and justify it. Guidance suggests expenses such as rates, land taxes, rent and lease costs which are mainly for the area used for R&D activities, may be best apportioned on a basis that reflects the area of use.

The Production Resource Rent Tax (PRRT) also has long required taxpayers to determine a split of what expenditure relates to 'carrying on project operations' particularly in integrated gas-to-liquids projects (e.g. LNG projects). It also has to establish a split of costs between upstream and downstream activities for the purposes of determining what is assessable. The concepts are relatively broadly drafted and the ATO has released guidance to help taxpayers who are subject to the PRRT Regulations (i.e. LNG project participants) determine how to *inter alia* apportion costs

Industry who work across the gas as well as minerals suggest these positions are generally not contentious with respect to LNG projects.

How apportionment of expenses is determined by the Commonwealth Government will underpin the fundamental mechanics of the CMPTI. AMEC would welcome further consultation on which of the apportionment mechanisms the Government chooses to use.

Administrative Arrangements

20. Please provide feedback on the proposed administration arrangements.

The proposed format of the Department of Industry, Science and Resources and the Australian Tax Office co-sharing administrative arrangements is supported. However, the role of the Geoscience Australia (GA) laboratory in each project's output has been questioned. The GA laboratory should act as an auditor, randomly sample the CMPTI applications to independently verify the inputs provided.

Australia has a well-established, internationally recognised, laboratory ecosystem that has managed the specification and analysis of minerals since before Federation. The performance and integrity of Laboratories is vital for the mining industry and their customers. There is an International Federation of Inspection Agencies (IFIA) that audits members. Every major laboratory in Australia adheres to international ISO standards 17025 and 9001.

Minerals are tested when they are dispatched to the customer and upon arrival. The Laboratory test results, and their underlying methodologies are internationally standardised and regulated, so that the producers and customers can have an agreed framework for the quality of their minerals.

AMEC recommends that the full Weighing, Sampling, Moisture Determination (WSMD) service form a part of the CMPTI process with the ATO accepting the Certificate of Analysis at the point of dispatch as evidence the product has been produced. There are also a range of independent lab certificates issued as a way of Government managing their risk associated with the initiative.

The trade dispatch testing is the final step in the WSMD service to complete a trade contract. It is stepped out below:

- To complete a trade contract the buyer and seller will need to agree the weight of the material to be paid for along with the quality. This involves weighing the cargo, sampling the cargo in a representative manner, determining the moisture, and agreeing the "dry" weight for payment, and then testing the samples for quality.
The sampling can take place at various locations depending on what is agreed in the contract.
- This WSMD process is usually performed by an independent inspection company/laboratory.
- The independent inspection company then prepares sets of samples for the buyer and seller. These samples are then dispatched directly to the labs as instructed by buyer and seller. This ensures a clear independent chain of custody of the samples.
- The independent inspection company will also prepare a certificate of weight, showing the gross, net, wet, and dry weights for the cargo that was inspected and sampled, along with lot numbers, vessel name or other identifying features to relate that cargo to the certificate.
- The samples are analysed separately and the parties then "exchange" the results.
- Depending on the side of the assay differences, the parties could agree to split the difference, or to go on umpire and have a set of reserve samples analysed by a 3rd lab.
- Umpires come at an additional cost, and umpire analysis costs more than party analysis done in the previous step, therefore umpires are not automatic.

As regards to Umpiring it should be noted that in large cargoes, even small differences in concentrations can result in a very large financial difference when the results are scaled upward for a cargo of many thousands of tonnes. Where an agreement is not possible, the Umpiring Laboratory

may be employed to conduct its own analysis of samples to determine an independent result. Depending on the nature of the contract between the two differing parties the analysis may be advisory or binding.

There is a high volume of testing occurring already in the open market to ensure minerals qualify. As the transactions are almost entirely arms length, the results are contested. Particularly in the critical minerals space the customer specifications are crucial as entire processing facilities further downstream have a narrow calibration for their inputs. Customers do not have the flexibility to take product that does not meet requirements.

Prequalifying to meeting these requirements to be considered for offtake is, in itself, an exhaustive process. Companies must produce commercial scale processed samples of their product during the offtake process so that customers may discern whether they are able to meet the required product outcomes.

Industry has an established and well-functioning laboratory ecosystem. The problem of substantiation, which underpins the line of questioning from the Government is one that has been encountered by Industry. The Laboratory ecosystem is the solution.

AMEC strongly recommend rather than creating a new mechanism to quantify and qualify critical minerals, the Commonwealth Government should use the existing laboratories. The CMPTI should take evidence of the produced final product from a document such as the Certificate Analysis.

Noting that a Certificate of Analysis is accepted as evidence by the IRS in the US for the Advanced Manufacturing Production Tax Incentive.

Appendix 2 as attached provides a high level overview of the testing that occurs throughout the value chain.

21. What testing certifications of processed minerals are common in industry?

The following testing certifications are common umbrella ISO certifications that most major labs operate under:

ISO17025 is a National Association of Testing Authorities (NATA) accreditation, which covers all analysis related to ores and minerals, environmental, and materials (including oils and lubricants etc).

ISO45001 is a National Association of Testing Authorities accreditation for Health and Safety.

The National Association of Testing Authorities (NATA)³ is the overseeing agency for the quality control of private laboratories. On the 25 June 2024 in Sydney, the NATA signed a new Memorandum of Understanding (MoU) with the Commonwealth of Australia.

Under the MoU, the Commonwealth Government recognises NATA as Australia's national authority for the accreditation of laboratories, reference materials producers, proficiency testing providers and biobanks, and a peak authority for the accreditation of inspection bodies. The Government also recognised NATA as Australia's compliance monitoring authority of the OECD Principles of Good Laboratory Practice.

³ <https://nata.com.au/>

22. Do businesses regularly rely on commodity contracts to evidence the purity of the commodities being exchanged?

All companies that provide minerals to a customer have arrangements in place to evidence the purity of minerals at the point of dispatch and receipt. Specifications on the quality of the mineral to be produced are identified in the original offtake contracts, sale contracts and other commercial arrangements.

Most sales agreements for critical mineral products would include quality specifications and a mechanism for measuring the product against these specifications. That would typically include the use of an independent body to provide the quality measurements.

For the purposes of the CMPTI the key consideration is the acceptance of the product by a customer

23. Do current facilities fail processed mineral purity tests? If so, how often?

There is variability in the outputs produced at all facilities and there are instances where individual tests that are disputed. There are no statistics collected on how often this occurs. Industry has noted that there is a commercial advantage in disputing tests, as a marginal difference in purity can lead to a much proportionally larger change in penalties, fees and the price able to be charged.

Downstream critical minerals have higher degrees of purity that makes the margin for error finer. If a product demands a certain number of nines beyond a decimal point there will be high demands for performance.

Disputes in mineral purity are adjudicated through the Umpiring Laboratory process outlined earlier question 20. The arm's length transaction, and the competitive dynamic in the market, incentivise customers to question any perceived differences in testing results.

Community benefits

24. What obligations should be imposed on potential recipients of the CMPTI to ensure the community benefit principles are met?

In gaining the necessary State and Federal approvals to construct and operate any downstream facility the proponent will have satisfied a number of social, environmental and community benefit tests. Fundamentally to qualify for the CMPTI a project will need to be value adding in Australia and hence has a community benefit.

Furthermore, if a company is undertaking further downstream mineral processing in Australia, they will have invested hundreds of millions of dollars in Australia to do so. The company will have met the equivalent of multiple community benefit principles at the State level already while meeting their regulatory obligations. This includes from local content and jobs provisions to payments to Local Government's for the quality of roads.

Most of the companies currently considering going downstream in Australia are doing so because they have a mine, and that there are advantages to building downstream facilities on site or nearby. To build that mine, a company will have had to achieve an even greater level of community benefit.

Most mines are in remote and regional areas, and are underpinned by agreements with local indigenous groups and other land holders. As well as having to have undergone a fulsome environmental review, often duplicated by both Commonwealth and State Governments.

The obligation that should be placed on recipients of the CMPTI should be workable, as companies that will be eligible will already be meeting them. There is some concern within Industry that this requirement will reflect a duplicative administrative burden.

This provision is a further duplication on a requirement that is already duplicated by the Commonwealth and State Government. The Government risks needless administrative burden that will not lead to improvements in outcomes.

The purpose of the CMPTI must remain to incentivise downstream processing, no more.

25. What obligations are potential recipients of the CMPTI currently subject to that might support the community benefit objectives (noting these will be finalised under the Future Made in Australia Act)?

The obligations defined in the Future Made in Australia Act, as they entered Parliament on 3 July is replicated as follows in Part 10:

The *community benefit principles* are:

- (a) that Future Made in Australia support should provide community benefits, in particular by:
 - (i) promoting safe and secure jobs that are well paid and have good conditions; and
 - (ii) developing more skilled and inclusive workforces, including by investing in training and skills development and broadening opportunities for workforce participation; and
 - (iii) engaging collaboratively with and achieving positive outcomes for local communities, such as First Nations communities and communities directly affected by the transition to net zero; and
 - (iv) strengthening domestic industrial capabilities, including through stronger local supply chains; and
 - (v) demonstrating transparency and compliance in relation to the management of tax affairs, including benefits received under Future Made in Australia supports; and
 - (b) any other principles specified in the rules for the purposes of this paragraph.
- (4) Subsection (1) does not apply to the provision of Future Made in Australia support under a particular law:
- (a) to the extent that having regard to the community benefit principles would be inconsistent with that law; or
 - (b) in circumstances prescribed by the rules for the purposes of this paragraph.

The community benefit principles can be met by each Mine and downstream processing facility in Australia. Companies have to evidence each of these requirements to State and Territory regulators. However, how the Commonwealth chooses to regulate compliance with this provision may create an unintended administrative burden.

AMEC strongly recommends that the whole tax group is considered, rather than the specific sub-unit that is the mineral processing unit. The risk is that it can be challenging to apportion the community benefit between the mine, which will have hundreds of jobs, and the downstream processing part (which may have less, but more technical skill sets).

As was noted above, the community benefits test duplicative. The Government risks needless administrative burden that will not lead to improvements in outcomes.

Industry understands and is completely willing to meet its community benefit obligations. All of the companies that will be eligible for the CMPTI will meet the requirements outlined above.

26. Are there any additional objectives that you consider important? What obligations might support these?

The Future Made in Australia Act's list is comprehensive and should not be extended. It has been noted that the purpose of the CMPTI is to promote further downstream processing, the achievement of which is rare in Australia, so the barrier to do so should not be raised higher by further administrative burden for outcomes already being achieved via multiple other regulatory provisions.

27. Recipients of the CMPTI may be subject to additional transparency and disclosure requirements in order to be eligible. What kind of requirements are appropriate? What are the key practical considerations to take into account when setting the requirements?

Respect for the commercial sensitive information regarding technology, and the cost structures, and the involved intellectual property is paramount. Although it is not expected that such additional transparency requirements would be extending that far.

A key practical consideration are for any unintended consequences with transparency and disclosure requirements that extend beyond the Australian Security Exchange requirements for disclosure. However, it has been noted by many in Industry that the tax transparency requirements referenced, if they are similar to the manner in which they are implemented in the rest of the industry, will be acceptable.

28. How should entities proposing to claim the CMPTI be required to demonstrate compliance with tax obligations?

Industry anticipates the CMPTI will be evidenced in a similar manner to all other tax incentives available in the market.

The provision of documentation would align with normal tax compliance arrangements, so evidence the CMPTI to the Australian Tax Office would include a record showing all of the following:

- the name or business name of the supplier;
- the amount of the expense or cost of the asset;
- the nature of the goods or services purchased;
- the date of the purchase of goods or services;
- the date the document was produced.

The quantify and quality of the minerals produced could be evidenced through the provision of a Certificate of Analysis by an internal or independent laboratory to the ATO, noting the above commentary regarding the WSMD process. This could be quantified and analysed by the Government accordingly.

29. What information do you think should be reported publicly on the recipients of the CMPTI and the amount of credit received?

The model used by the Research and Development Tax incentive could be applied to the CMPTI. In the R&D Tax incentive a company completes the required form, and then two years afterwards, the Australian Tax Office will publish information that identifies:

- name of the R&D entity claiming the R&D tax incentive
- entity's Australian business number (ABN) or Australian company number (ACN)
- entity's total expenditure on R&D (known as total notional deductions claimed – label Z in Part A of the R&D tax incentive schedule) less any feedstock adjustments (label B in Part B of the R&D tax incentive schedule).

Mirroring this existing practice would be a simple and transparent manner of reporting the CMPTI. Noting that many critical minerals downstream facilities are commercially sensitive and the provision of granular detail rather than totals would be out of step with the market.

30. Who should the reporting requirements be imposed on? For example, on the recipient entity, or central reporting through a regulator?

Central reporting through a regulator would be easier to monitor and administer. Noting that this model has been applied for the R&D tax incentive and the PRRT.

Other: Franking Credits

The CMPTI will give rise to a reduction in corporate tax payable in Australia. For foreign-owned recipients this could represent a permanent saving in Australian tax, but for Australian resident groups who pay fully franked dividends, this could be clawed back of shareholders if dividends paid are then not fully franked. A potential legislative consideration for this inequity could be to give a full franking credit as if the credit were not available, such that the credit is not effectively repaid by Australian resident shareholders.

Review

The Budget and Government policy has currently limited the CMPTI to 10 years. However, if successful in building new industries a future government could look to potentially extend and continue to the CMPTI. A concern highlighted by Industry is that the current drafting and scale may unintentionally not be fit for purpose. AMEC recommends a review is put in place in 2026 to consider the CMPTI and whether it helps Australia compete to meet market demands.

As noted above, the critical minerals market is rapidly evolving and there is expected to be demand for future chemistries currently not considered. A review could provide the needed flexibility to meet those anticipated evolutions.

What is next?

AMEC would welcome the opportunity to support the further development of the Production Tax Incentive and the details of the associated framework. This submission was drafted with the support of many members across Australia involved across the critical minerals value chain. As the Government moves to further consult, we would welcome opportunities to further engage.

Final comment

If the CMPTI is carefully framed when it is established, it has the potential to have an outsized impact on the choices of proponents considering further downstream processing critical minerals in Australia. AMEC has appreciated the opportunity to provide comment on this phase of the consultation and would welcome opportunities for us and our members to provide further detailed feedback.

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