Submission to the House of Representatives Standing Committee on Primary Industries

Inquiry into Social Licence and Economic Development Outcomes in Critical Minerals Projects Across Australia

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This submission does not reflect a single Australian Strategic Policy Institute (ASPI) perspective; it is the authors' opinion.

1. Introduction

Australia's critical minerals sector now sits at the intersection of economic development, national security and regional resilience. In an era defined by geostrategic competition, weaponised interdependence and supply chain fragility, critical minerals are no longer a niche subset of the resources economy. They underpin advanced manufacturing, clean energy systems, defence capability and sovereign industrial capacity. Their importance is strategic, not simply commercial.

Australia's predominant model of extraction and export continues to support strong sustainable supply for diversified global markets across many commodities.. That model delivered prosperity, but it also entrenched structural vulnerabilities. Continued underinvestment in many regions that generate national wealth has driven disparity domestically. Limited development of value-add capacity and downstream industrial capability has exacerbated exposure to concentrated downstream markets and risk of coercive leverage, (+/- whilst forgoing the opportunity to modernize onshore industrial and manufacturing ecosystems).

Critical minerals, therefore, present both an opportunity and a warning. They offer a pathway to reposition Australia as a reliable, resilient and trusted partner in an increasing volatile global market. But if approached as another short-term commodities cycle, driven solely by price spikes, speculative optimism and upstream expansion, they risk reinforcing the very fragilities they're meant to address.

The strategic challenge is not simply to extract more, but to position Australia more intelligently within the broader supply chain architecture, including, over

time, processing, intermediate production and elements of advanced manufacturing where economically viable.

This task is unfolding in a policy environment characterised by urgency. Global competition has generated a proliferation of strategies, incentives and geopolitical narratives. That pressure is real, but it heightens, rather than diminishes, the need for discipline. Domestic policy settings must be regionally grounded and sequenced carefully. Incentives should crowd in viable investment, not accelerate premature lock-in or distort local systems before projects mature.

Importantly, the sector is not naïve. Many established and emerging companies operate to high regulatory standards and understand the commercial and social risks of mis-sequencing projects. Australia already has substantial engagement and environmental governance frameworks, including Native Title processes, ILUAs, EIS requirements and heritage protections. The argument is not that the industry is systemically flawed. It is that the strategic weight now placed on critical minerals raises the bar for coordination and consistency across jurisdictions.

Early-stage impacts matter. Tax settings, financing mechanisms, and tenure incentives can shape exploration patterns, infrastructure expectations, and land-use decisions well before final investment decisions are made. States and territories have a role in monitoring cumulative impacts and ensuring that policy ambition does not outpace regional capacity.

At the centre of this discussion sits social licence and regional economic development. These are not peripheral issues. They are important in and of themselves and strategically consequential. Without a durable social licence, projects stall, reputational risk spreads across jurisdictions, and investor confidence weakens. The performance of one project increasingly shapes perceptions of an entire region or sector. Recognising this dynamic does not create sovereign risk; it addresses expectations transparently and strengthens credibility.

Nor can economic development be assumed. Without credible pathways for local skills formation, procurement, infrastructure reinvestment and value-add capacity, regions risk experiencing extraction without transformation. Benefits may accrue unevenly while housing, services and local systems absorb pressure. What is often labelled “community resistance” frequently reflects distributional stress and perceived inequity, as well as concerns about fairness, sequencing, and long-term outcomes. Left unaddressed, those pressures translate into supply chain fragility and strategic risk.

Australia cannot afford to compromise on standards in pursuit of speed. If the nation seeks to position itself as a trusted supplier of sustainable, value-added critical minerals, domestic governance must withstand scrutiny. Strong regulation already exists, but governance review and continuous improvement are legitimate in a sector of growing national importance. Taking standards seriously signals maturity, not weakness.

There is also a broader risk. A pressure-cooker policy environment, amplified by political urgency and external commentary, can disrupt local settings. Overlapping engagement processes, proliferating advisory platforms, and externally driven agendas can strain fragile regional governance systems. Getting this right requires both restraint and ambition. Transparent communication, disciplined sequencing and genuine and responsible engagement strengthen both industry viability and regional cohesion.

Ultimately, critical minerals development must be treated as a long-term nation-building endeavour. Nation-building implies stable policy settings, coordinated infrastructure planning, workforce localisation, credible engagement with Traditional Owners and communities, and deliberate value-capture strategies that extend beyond royalties. It implies intergovernmental coordination that simplifies rather than layers regulatory complexity. And it implies strategic patience: resilience is built through institutions and ecosystems, not announcements.

This submission approaches the terms of reference through that lens, recognising the tensions inherent in regional development, acknowledging the strategic stakes for national economic security, and arguing that disciplined governance is not a constraint on growth, but the foundation of sustainable, trusted and resilient critical minerals supply.

2. Effectiveness of Engagement Practices with Local Communities and Traditional Owners

Engagement in the critical minerals sector must move beyond procedural compliance and toward durable, co-designed regional governance. Many companies, large and small, already uphold high standards of local engagement. Australia's regulatory architecture is also substantial. Native Title processes, Indigenous Land Use Agreements, social impact assessments, Cultural Heritage Management Plans and associated state and Commonwealth legislation has evolved over decades and have been tested by industry, Traditional Owners and governments alike. These frameworks matter and, in many cases, they work.

But regulatory compliance and high individual standards are not the same as systemic resilience. If Australia is serious about building a durable critical minerals industry, one capable of underpinning sovereign manufacturing, allied supply chains and long-term regional development, engagement cannot be treated as a regulatory hurdle to clear on the way to project approval. It must be embedded structurally in how projects are conceived, financed, developed, operated and ultimately closed or transitioned over multi-decade lifecycles.

The complexity of engagement environments, particularly in remote and culturally distinct regions, reinforces this point. Overlapping Traditional Owner interests, multiple agreements, organisational governance pressures, workforce mobility and industry stop–start cycles can strain even well-designed processes. Smaller or emerging proponents may face capability constraints; local organisations may carry heavy governance burdens; and the

translation of negotiated benefits into durable community outcomes is not automatic.

The intent, therefore, is not to suggest systemic failure. It is to recognise that the strategic weight now placed on critical minerals raises the bar. Engagement must be durable, culturally literate and economically meaningful across the full project lifecycle, from exploration through to closure and transition. In a sector increasingly tied to national security and international trust, social licence is not static. It requires continuous investment in relationships, governance capability and institutional strength.

Strong regulation provides a foundation. High-performing companies demonstrate what is possible. The strategic task now is to ensure that this level of engagement is not episodic or company-specific, but embedded consistently across the sector and sustained through commodity cycles.

Critical minerals projects vary significantly in scale, capital intensity and operational model, from decentralised, off-grid, remote extraction sites to midstream and reprocessing initiatives at existing mine sites to vertically integrated processing hubs, multi-user industrial precincts and manufacturing hubs. Some projects operate in sparsely populated regions with limited infrastructure and deep cultural heritage; others sit adjacent to established mining corridors or urbanised zones.

Yet engagement frameworks often default to regulatory models originally designed for conventional upstream mining operations. These frameworks tend to be compliance-driven, time-bound and documentation-heavy: structured around defined approval milestones rather than long-term relationship management and adaptive governance.

That model does not always translate neatly across the evolving critical minerals value chain. Downstream processing facilities, chemical plants and advanced materials manufacturing environments operate under intensive environmental and safety compliance regimes. Their risk profiles, workforce compositions, operating footprints, and community interfaces differ materially from those of traditional open-cut or underground mining projects. As critical minerals development expands beyond extraction into new processing and manufacturing, engagement frameworks must adapt accordingly.

In short, as the industry evolves, so too must the engagement architecture that underpins it.

A one-size-fits-all engagement model risks undermining local cultural integrity, overwhelming community capacity and embedding city-centric decision-making into regional contexts. In remote and Northern Australian communities in particular, the cumulative impact of multiple projects, each with its own consultation cycles, reporting requirements, and approval timelines, can generate fatigue, confusion, and disengagement. Even ‘minor capital expansions’ at existing sites, undertaken to capture critical minerals opportunities, can add incremental pressure. While such expansions may sit

within established operational footprints, their engagement demands still accumulate at the community level.

When engagement is experienced as transactional, procedural, or extractive, social licence erodes over time, even when formal agreements, approval pathways, and compliance milestones are satisfied. The risk is not necessarily regulatory failure, but engagement saturation. Communities with limited governance capacity can be stretched thin by overlapping processes, technical documentation and compressed consultation windows tied to market cycles.

There is also a more difficult ethical dimension. A strong emphasis on 'local economy models' and participation pathways, while well-intentioned, can create pressures within delicate social environments. Remote regions often have finely balanced community dynamics, complex Traditional Owner relationships and evolving governance structures. Preferred partnerships, selective contracting arrangements, or uneven benefit distribution can unintentionally disrupt social cohesion rather than strengthen it. These are not theoretical risks; they sit at the intersection of economic ambition and regional evolution.

The remote north and other fragile regions should not become arenas for corporate hype, short-term relevance seeking or externally driven agendas. Engagement must be disciplined, culturally literate and paced to regional capacity. That includes recognising when cumulative activity across proponents, consultants, and advisory actors begins to exceed what communities can reasonably absorb.

These are strategic governance questions. They are grounded in the long-term viability of both regional cohesion and industry itself. While this section focuses on engagement rather than participation pathways, the distinction matters: effective participation depends on credible engagement first. If the engagement architecture is extractive or overstretched, participation models will not deliver durable outcomes.

Thus, sustained social licence in critical minerals regions will depend not only on regulatory compliance and economic opportunity, but also on protecting cultural integrity, strengthening governance capability, and managing cumulative pressures with restraint as well as ambition.

Regional disadvantage heightens the criticality of appropriate engagement. In regional Australia, and in particular Northern Australia, the growing disparity with southern capitals is not just a service or infrastructure gap, but a widening gap in information, inclusion and regional voices. In redressing this gap, bringing an earnestness to the engagement process that bridges a more fully informed basis for (potential) consent is important.

Another risk lies with the Government itself. Direct and genuine engagement is valuable. Testing policy ideas with communities early, being present in the region, and maintaining open channels of communication strengthen decision-making and trust. But when engagement platforms multiply without discipline,

integrity can be diluted. Superficial consultation forums, overlapping advisory bodies and performative visibility exercises can act like bureaucratic acid, slowly eroding the quality of conversation. Inter-departmental competition, branding exercises and policy signalling can crowd out the earnest, place-based dialogue that regional communities expect. Over time, this dynamic weakens trust not because engagement occurs, but because it is perceived as fragmented, transactional or driven by institutional self-interest rather than regional outcomes.

As new waves of priority emerging industries, including critical minerals, intersect lower-population regions, the scale and pace of change risk overwhelming the community's ability to respond and absorb the extent of the change. Comprehensive engagement should cater not merely to an interested subset of the community but also acknowledge the often-silent majority, those who may experience the protracted creep/harm/diminishment from non-inclusion in the perpetuated cycle of 'doing things to a region'. Effective engagement would recognise the full extent, cultural tendencies and reality of engagement with communities.

When information gaps intersect with superficial engagement and weak or fragmented governance processes, regional communities are exposed to avoidable disruption. In a nationally significant critical minerals sector, this can manifest not only through cumulative development pressures, but also through the amplification of narrow commercial priorities, externally driven agendas or misaligned advocacy. The consequences are often practical rather than dramatic: uneven benefit distribution, consultation fatigue, erosion of local confidence, heritage mismanagement, biodiversity degradation or strained community relationships.

In such environments, local voices can be diluted, not always through overt conflict, but through process overload, technical complexity or poorly sequenced decision-making. Benefits negotiated in principle may not translate effectively into durable regional outcomes if governance capacity is stretched. These risks do not imply systemic failure, but they do underscore vulnerability where ambition outpaces coordination.

Industry and Government, therefore, carry a heightened responsibility to lead well. That means closing information gaps early, sequencing engagement realistically, reinforcing credible local governance platforms and being alert to deliberate or opportunistic disruption, whether commercial, political or reputational in nature. Strong, transparent leadership reduces the space for misrepresentation, speculation and fragmentation. In a sector under strategic scrutiny, disciplined governance is not optional; it is the mechanism that protects both regional cohesion and industry viability over the long term.

Three structural issues require attention.

First, the burden of engagement. Smaller, remote projects often face disproportionately high engagement and reporting requirements relative to their scale and financial capacity. While high standards are appropriate, particularly in a sector of strategic importance, regulatory complexity can

inadvertently privilege larger operators with dedicated compliance teams and external advisers. This dynamic can entrench consolidation and reduce diversity within the sector.

Engagement processes are often mediated by external consultants who, while professionally competent, may lack deep regional literacy or long-term relationships. This can inadvertently sideline local leadership and knowledge. Communities may experience engagement as filtered through intermediaries rather than conducted directly and transparently.

The solution is not necessarily to impose rigid new tiered engagement frameworks. Australia already has substantial regulatory architecture: exploration permits, mining licences, Environmental Impact Statement processes, social impact assessments, heritage assessments and Native Title and ILUA negotiations. These mechanisms are structured, often risk-based, and in many cases leave limited flexibility for procedural redesign.

The more durable answer sits alongside formal regulation rather than on top of it. Governments should incentivise the development of direct, locally anchored, long-dated engagement capability within companies operating in critical minerals regions. This capability should be embedded early, including at the exploration stage where feasible, and sustained across project lifecycles. Crucially, engagement functions should have sufficient independence from short-term commercial performance metrics to preserve credibility. Where engagement staff are structurally tied to project approvals or production milestones, trust can be undermined.

Grassroots social licence is built through continuity, cultural literacy and relationship depth, not compliance sequencing. Exploration, approvals and operational phases will always differ in scale and regulatory intensity. What must remain consistent is the presence of informed, regionally grounded representatives empowered to engage honestly and over time.

Strengthening this softer but more resilient engagement architecture reduces reliance on rotating intermediaries, supports local governance capacity, and complements rather than complicates existing statutory processes. In a sector where regulatory requirements are already dense, durable trust will be built less by additional procedural layers and more by sustained, locally embedded practice.

Second, Free, Prior and Informed Consent (FPIC). FPIC should be understood as a substantive governance principle, not a rhetorical standard selectively applied to developing economies or reduced to a corporate reporting reference. In Australia, its practical expression intersects with existing legislative and policy frameworks, including Native Title processes, ILUAs and heritage protections, and the extent to which it is embedded varies across jurisdictions and regulatory instruments. That complexity does not diminish its relevance. It reinforces the need for clarity and consistency in how consent is approached in long-life, strategically significant projects.

In the context of critical minerals, where developments may operate for decades and intersect with culturally significant land and waters, early, continuous and transparent engagement with Traditional Owners is essential. Regional disparities can heighten this imperative. Where governance capacity, access to independent advice or institutional support is uneven, consent processes must be especially robust to ensure decisions are informed, representative and durable.

FPIC principles are also relevant beyond Traditional Owner engagement. Broader community engagement, including in regions unfamiliar with mining or downstream processing activities, must likewise be free of coercion and grounded in clear, balanced information before irreversible commitments are made. Non-biased engagement is critical. Communities should be equipped to understand not only environmental considerations, but also financial structures, market risks, operational realities and long-term trade-offs. Informed consent in this broader sense strengthens social cohesion and reduces misalignment later in project lifecycles.

There is also a growing ecosystem of actors engaging in the critical minerals debate, including academic, cooperatives and advocacy groups, whose contributions can be valuable. However, where narrow or selectively framed narratives dominate at the regional level, particularly in the absence of a transparent financial or governance context, the spirit of informed consent can be undermined. Remote and regional communities should not be inundated with externally driven agendas that fragment local discourse or privilege city-centric perspectives over place-based realities.

The intent is not to restrict debate, but to reinforce integrity. FPIC, properly understood, is about balanced information, representative governance and respect for cultural authority. In a sector under increasing strategic scrutiny, maintaining that integrity across Traditional Owner engagement and broader community dialogue is foundational to long-term legitimacy and regional stability.

FPIC is not a single event tied to project approval. It’s an ongoing relationship grounded in trust, information symmetry and genuine participation in decision-making. Stable, long-term partnership agreements, covering employment pathways, procurement opportunities, environmental stewardship, and economic empowerment, are critical to sustaining social licence across commodity cycles. Importantly, consent processes must be supported by adequate resourcing for Traditional Owner groups, enabling them to engage on an informed and independent basis.

Third, regional capability. Effective engagement requires capability on both sides of the table. Many formal structures already exist, particularly through Native Title frameworks and established Traditional Owner representative bodies. The task is not to duplicate these mechanisms, but to strengthen their capability and ensure they are adequately resourced to engage in increasingly complex critical minerals developments.

Governance in this space is demanding but essential. As projects become larger and supply chains more strategically sensitive, engagement requires technical literacy, regulatory understanding, commercial awareness and cultural authority. Governments should therefore prioritise strengthening regionally led engagement platforms, supporting local facilitators, investing in regional regulatory and governance support teams, and reinforcing First Nations-led advisory structures where they already operate. Capability building should enhance existing institutions rather than impose parallel, externally designed models.

Overreliance on non-regional actors can unintentionally disrupt local processes, particularly where city-centric perspectives or narrowly framed technical assessments override place-based knowledge. This underscores the importance of robust consent processes, including free, prior and informed consent, and the need for governance structures that genuinely reflect the diversity of views within communities.

Strong governance also ensures that negotiated benefits are translated into durable community outcomes, whether through employment pathways, equity participation, infrastructure, or cultural and environmental protections. Capability on the industry side is equally important: engagement must be informed, culturally literate and sustained, rather than transactional.

Embedding and strengthening regional governance capability reduces friction, supports social cohesion and reinforces legitimacy. In a sector under growing national and international scrutiny, that governance architecture is not ancillary; it is foundational to durable development outcomes.

Investment in regional governance capacity also supports continuity. Engagement should not reset with each change in project ownership, commodity price fluctuations, or government cycles. A stable regional engagement ecosystem, backed by institutional memory and local leadership, helps anchor projects within the region's social fabric.

Ultimately, social licence in critical minerals is not a communications strategy. It is not secured through glossy ESG reports or periodic town hall meetings. It is a locally grounded governance architecture, one that integrates cultural respect, genuine economic participation, transparent decision-making, aligned expectations and long-term partnership into the industry’s operating model.

Social cohesion is central. Where development intersects with communities, Traditional Owners and existing industries, legitimacy must be built through consistent practice, not episodic engagement. Consent processes, benefit sharing, workforce inclusion and environmental stewardship must be embedded structurally, not treated as compliance layers.

If Australia seeks to position itself as a trusted supplier within allied critical minerals supply chains, that trust must begin domestically. International credibility rests on the integrity of local governance. Social licence must be culturally literate, economically meaningful and regionally durable. In a sector defined by strategic sensitivity and global scrutiny, legitimacy stands

alongside security of supply as a core requirement—not a secondary consideration.

3. Strategic Importance Beyond Market Size: Regional and National Economic Contribution

While critical minerals represent a small fraction of Australia's resource exports, particularly compared with traditional bulk export commodities, their potential contribution to regional economic development and future industry skills needs warrants consideration. Australia possesses significant critical mineral resources, though translating resource potential into durable regional prosperity requires a clear-eyed understanding of viable and resilient industrial ecosystems.

Australia has repeatedly demonstrated world-class capability in exploration and extraction. The strategic question before us is whether we are prepared to demonstrate the same capability in industrial formation. If critical minerals are to underpin a 'Future Made in Australia', they must catalyse a shift from episodic project development to ecosystem development.

Four issues are central.

1. **From 'dig and ship' to value-add.** Critical minerals offer Australia a rare opportunity to move up the value chain, into processing, refining and advanced manufacturing linked to batteries, renewable energy systems, defence technologies and digital infrastructure. For decades, Australia has exported raw materials and imported higher-value manufactured products. That model delivered growth, but it limited sovereign capability and exposed Australia to external supply chain shocks.

If Australia is serious about embedding economic security into its industrial strategy, then onshore downstream capability must be treated as core, not optional. This does not mean attempting to onshore every stage of every supply chain. It does mean strategically identifying where Australia can build competitive advantage in midstream and downstream processing, particularly where energy, land availability, allied market access and regulatory stability create structural strengths.

Regional industry hubs and multi-user precincts, particularly in Northern Australia, can create the density required for innovation, shared infrastructure and cost efficiencies. Clustering reduces unit costs for energy, water, waste management, logistics and permitting. It also enables a localisation value-add strategy, with in-situ knowledge ecosystems, regional skills development, and local innovation pathways adjacent to or co-located with industry. Without clustering, individual projects will struggle to overcome productivity and scale constraints in global markets dominated by state-backed incumbents.

Value-add also strengthens social licence. Communities are more likely to support projects that generate visible, long-term economic opportunity rather than short-lived extraction booms. Downstream activity embeds projects more

deeply in local economies, increasing multiplier effects and creating more diverse employment pathways.

2. Stability and resilience. Critical minerals markets are inherently volatile. Many are niche commodities with concentrated global supply and demand, subject to technological substitution, policy shifts and geopolitical disruption. Prices can move sharply, and early-stage projects often operate on thin margins. This volatility is magnified in remote regions where infrastructure and labour costs are high.

Regions cannot absorb repeated project failures. A succession of stalled or bankrupt projects erodes investor confidence, undermines community trust and destabilises local employment. Governments must therefore assess cumulative commodity risk at a regional level, not just project by project.

Policy tools should be calibrated accordingly. These may include common-user infrastructure to reduce duplication and lower barriers to entry; shared logistics corridors linking mine sites to ports and processing facilities; and, in limited, strategic cases, mechanisms such as floor price arrangements, offtake guarantees, or strategic reserves to stabilise early-stage industries during periods of market distortion. Such mechanisms must be carefully designed to avoid moral hazard, but dismissing them outright ignores the reality of state-backed competition in global critical minerals markets.

Resilience also requires diversification. Regions overly reliant on a single commodity are exposed to abrupt technological shifts. Coordinated planning across minerals, energy and defence infrastructure can help build more robust regional economies capable of absorbing shocks.

3. Local value capture. Historically, royalties and taxation from resource development have flowed predominantly to capital cities, with insufficient reinvestment in producing regions. While fiscal centralisation serves national objectives, sustainable economic development requires strengthening the enabling infrastructure, transport, housing, digital connectivity, health, and education in regions that generate national wealth.

Local value capture is not simply about tax distribution. It is about building the conditions that allow regions to host complex industries. Without housing and social infrastructure, workforce attraction fails. Without digital connectivity, advanced manufacturing and automation lag. Without local procurement strategies, supply chains bypass regional SMEs.

Models such as Western Australia's Royalties for Regions demonstrate the potential of reinvestment frameworks. However, these must be transparent, accountable and aligned with long-term regional strategies rather than short-term political cycles. If critical minerals are to underpin nation-building, the communities that host these industries must see enduring benefits in infrastructure, services and opportunity.

4. Alternate economic development pathways. Regional development strategies rarely hinge on a single industry. Critical minerals sit alongside

traditional sectors and emerging industries that already shape regional identity, employment and long-term resilience. Any discussion of local value capture must therefore be genuine, grounded in how development interacts with existing businesses, alternative land uses and emerging value-add pathways. Incentives designed to maximise local benefit in extractive industries should not unintentionally result in disproportionate preferencing over other productive sectors.

Traditional industries, agriculture, pastoralism, fisheries, established mining and in some regions gas, remain the backbone of many regional economies. They provide employment continuity, export earnings and deep local capability. They are not legacy activities to be displaced lightly. At the same time, emerging sectors such as value-added agriculture, biofuels, renewables, decarbonisation initiatives and food security industries are increasingly central to national resilience. Biodiversity and healthy ecosystems underpin tourism, agribusiness and First Nations enterprises, and form part of a region's long-term economic potential, and identity or brand.

Critical minerals development does not automatically displace these sectors. In many cases, coexistence is feasible, particularly with agriculture and renewables, and shared infrastructure can strengthen multiple industries. Land-use footprints are often modest in proportional terms. However, scale, water allocation, workforce competition, infrastructure prioritisation and disruption of regional branding can create friction. Even where direct land competition is minimal, misaligned industrial development can disrupt a region's future economic trajectory, particularly where decarbonisation or bio-based industries are central to its strategy.

The policy challenge is not to elevate one sector over another, but to evaluate trade-offs transparently and strategically. That means assessing long-term economic contribution, multiplier effects, environmental sustainability, social licence and national resilience value. Regional economies function as systems. Weakening durable industries in pursuit of speculative gains can reduce resilience rather than enhance it.

Industrial geography matters in resolving these tensions. Established mining centres and industrial precincts, inland resource hubs and coastal processing zones, often offer competitive advantages for critical minerals development. Existing infrastructure, skilled labour pools and service ecosystems reduce risk and limit land-use competition. Where geology aligns, leveraging historical industrial zones is typically more efficient and less disruptive than creating entirely new precincts.

Legislative settings can further strengthen coexistence. Frameworks that enable coexistent operations and inter-industry transitions, from extraction to processing, reprocessing and potentially advanced materials, can support commercially viable long-term pathways without foreclosing culturally appropriate or environmentally necessary closure options. This approach creates optionality rather than lock-in. It also encourages diversified skill sets,

regional partnership models and more stable commercial operations across commodity cycles.

By contrast, city-centric land-use overlays or heavily engineered industrial hubs that misread commodity market risk can embed structural weaknesses. If governments choose to back precincts or shared facilities, they must avoid concentrating supply chain risk or distorting market signals. Industrial coordination should reflect realistic market fundamentals, not policy momentum.

At a strategic level, the development challenge is not geological. Australia's resource endowment is clear. The constraint is coordination — aligning Commonwealth ambition with state implementation, investor expectations with community outcomes, and industrial capability with regional capacity. Critical minerals activity should not undermine the very future economy it seeks to secure.

Handled well, critical minerals can anchor diversified regional growth, strengthen value-add pathways and reinforce national resilience. Handled poorly, they risk repeating a familiar pattern: short-term extraction accompanied by long-term vulnerability.

5. Workforce Participation, Skills and Employment Pathways

Workforce shortages in regional Australia are structural, not cyclical. Long-term demographic trends, housing constraints, service gaps, educational centralisation and the gravitational pull of metropolitan labour markets drive them. In many remote and Northern Australian regions, the challenge isn't simply filling vacancies; it's building and sustaining a workforce ecosystem capable of supporting complex, technology-intensive industries over decades.

Critical minerals development will struggle to deliver durable value if local communities are excluded from the workforce transition. This applies as much to remote communities near resource deposits as to established regional centres and coastal industrial hubs—the locality of development matters for the available skills pool, training pathways, and long-term economic integration.

Projects that rely predominantly on fly-in, fly-out (FIFO) labour, external contractors and short-term specialist teams may achieve operational continuity in the narrow sense. Ore can be extracted, and plants can run. But operational continuity alone does not embed economic resilience. Over time, limited local participation weakens social licence, constrains regional multiplier effects and leaves communities exposed when commodity cycles inevitably turn. In some situations, it can undermine safety culture, skills retention and the transferability of capability across projects and sectors, all of which require stable, long-term workforces.

The structure of the value chain further complicates this. Upstream mining and extractive metallurgy are often co-located with the resource for economic and technical reasons. Midstream processing and reprocessing may also be

resource-proximate, where scale, energy, and logistics support them. Downstream activity, however, is more varied. Refining, advanced materials production and component manufacturing may cluster in coastal or industrial regions with access to ports, skilled labour and diversified infrastructure. In some cases, scale and site-based synergies support co-location; in others, separation reflects market logic and supply chain optimisation.

As critical minerals markets evolve, different industrial models can emerge. As an example, one model may emphasise protection of intellectual property and advanced manufacturing capability, potentially favouring more controlled, even semi-isolated production environments. This can support niche or high-value processing but is unlikely to rely on common-user industrial ecosystems. A second model would support shared infrastructure, rail, road, power, water and logistics, where common-user systems reduce transaction costs and improve supply chain efficiency.

Where caution is required is in government attempts to engineer industrial hubs or precincts without fully understanding commodity market risk, supply chain volatility and sector-specific economics. Publicly backed hubs can attract visibility and advisory input. However, if market fundamentals are misread, structural deficiencies can be embedded into the system, including excess capacity, misaligned infrastructure or exposure to single-commodity risk. If governments choose to take positions in hubs or precincts, they must ensure they do not inadvertently concentrate risk or distort market signals.

Onshoring ambitions introduce further complexity. The distinction between extractive metallurgy, production of intermediate products and advanced materials, and full-scale manufacturing is significant. Moving into component production, battery cells, magnets or other advanced products, brings different scale requirements, technology dependencies, recycling obligations and workforce skill sets. These activities demand specialised engineering, quality control and manufacturing expertise that cannot be assumed to flow automatically from existing industries.

Across all of these models, workforce inclusion remains central. Social licence is not only about environmental management or consultation; it is about whether communities see durable employment pathways, transferable skills and long-term industry presence. Supply chain resilience is likewise strengthened when local capability is embedded rather than transient. If critical minerals development is to contribute meaningfully to regional transformation rather than episodic extraction, workforce systems must be designed for continuity, adaptability and inclusion across commodity cycles and across the value chain.

Strengthening workforce participation in the critical minerals sector, therefore, requires structural reform and deliberate investment.

First, Australia needs localised sovereign workforce programs aligned with TAFE, regional universities and industry. Critical minerals aren’t traditional bulk commodities; they increasingly require expertise in chemical processing, advanced metallurgy, automation, quality control systems, and digital systems

integration. Workforce strategies must anticipate these skills requirements and embed them within regional education systems before projects reach peak demand.

This means aligning curricula with industry demand signals, supporting industry-led micro-credentialing, expanding apprenticeships in processing and advanced manufacturing, and ensuring that regional institutions are resourced to deliver high-quality training rather than acting as feeder systems to capital cities. Sovereign workforce programs should be place-based, recognising the distinct labour market conditions of regions such as the Northern Territory, northern Queensland and the Pilbara.

Workforce programs must outlast commodity cycles. Skills transfer and capacity building should be portable across regionally relevant sectors such as transport, energy, infrastructure and defence-related industries. Critical minerals development can act as a catalyst for broader regional capability, rather than a standalone employment spike tied to a single project lifecycle.

In practical terms, cross-industry skill development strengthens regional operating knowledge, particularly in safety, land management and environmental performance in specific local contexts. Stewardship here is not an abstract academic discipline or an add-on compliance function. It is grounded, place-based knowledge: understanding seasonal conditions, water systems, biodiversity patterns, cultural heritage obligations and the operational realities of working in remote environments.

Traditional Owner expertise and long-standing local knowledge are central to this capability. When embedded properly, they improve project design, reduce avoidable environmental harm, strengthen social licence and support continuity of practice across sectors. That continuity matters. It builds regional memory, an accumulation of practical insight into what works, what fails and how to manage land and infrastructure responsibly over time.

The risk in some workforce debates is an overproduction of generic qualifications disconnected from operational reality. Regional capability is not built by adding another layer of abstract environmental credentials. It is built through applied training, industry partnerships and genuine co-design with Traditional Owners and local communities, ensuring that biodiversity protection and land stewardship are lived competencies, not just policy aspirations.

Second, training pipelines must be co-designed with Traditional Owners and regional employers. Co-design isn’t a symbolic gesture; it’s essential to ensuring that training aligns with cultural obligations, local knowledge, community priorities and realistic employment pathways. In many remote Indigenous communities, barriers to participation include limited access to foundational education, transport constraints, digital exclusion and housing instability. Workforce policy must address these systemic issues alongside industry training.

Long-dated industry partnerships, covering apprenticeships, traineeships and structured career progression, are critical. These partnerships should extend beyond entry-level roles to include technical, supervisory and management pathways. If Indigenous and local workers are confined to peripheral roles without progression, workforce localisation will plateau, and trust will erode.

Remote and Indigenous communities must not be positioned as peripheral labour pools servicing externally controlled projects. They should be central partners in workforce strategy and co-architects of economic participation. This includes structured procurement pathways for Indigenous-owned businesses, mentorship programs, on-country training models, workforce retention models and technology-enabled remote learning solutions tailored to community contexts.

Third, liveability is a workforce issue. Regions cannot attract and retain skilled workers without adequate housing, childcare, healthcare, digital connectivity and community infrastructure. Housing shortages in many regional centres are among the most acute constraints on project development. Without coordinated investment in accommodation and essential services, workforce strategies will falter regardless of training effort. Inter-industry competition heightens this issue, and a step change, not incrementalism, is needed if critical minerals are to succeed alongside growth in traditional industries, renewables and other emerging industries.

Without workforce localisation, Australia risks building infrastructure in regions without building opportunities for those who live there. We risk replicating a pattern in which capital investment flows north, while economic and professional advancement flows south. A durable critical minerals industry demands more than operational labour supply; it demands the cultivation of regional human capital capable of sustaining industrial transformation over the long term.

If Australia aligns its workforce strategy with regional development, education reform, and Indigenous economic participation, critical minerals can underpin not only national economic security but also regional resilience and inclusion, in line with a Future Made in Australia.

5. Role of State, Territory and Local Governments

Regional Australia has limited tolerance for ’build slow, fail fast’ industries. Unlike metropolitan economies with diversified employment bases and deep capital markets, regional and remote communities are highly exposed to sectoral shocks. When projects stall, collapse, or scale back abruptly, the social and economic consequences are immediate: job losses, skills exodus, business closures, housing volatility, and the erosion of community confidence.

Critical minerals projects operate within an environment characterised by market uncertainty, geopolitical risk, technological disruption and intense international competition. Prices can swing rapidly. Processing technologies can become obsolete. Strategic demand can shift in response to policy

changes in allied markets. In this context, state, territory and local governments play a decisive role in shaping whether early-stage projects mature into stable industries, or remain speculative ventures vulnerable to failure.

The role of subnational governments here is strategic, but it must be informed before it is directive. Infrastructure sequencing, land-use planning, regulatory clarity and regional investment priorities all shape whether private capital is crowded in or deterred. However, these levers can only be used effectively if governments have a grounded understanding of industry dynamics, cost structures, project timelines and cumulative regional impacts.

Before attempting to 'lead' development pathways, states and territories need a clear view of how different segments of the sector operate, from exploration and mid-tier developers to vertically integrated incumbents, and how policy settings interact with global price volatility, financing constraints and trade exposure. Without that understanding, well-intended interventions risk distorting sequencing, misallocating infrastructure or creating regulatory uncertainty that undermines investment confidence.

Strategic leadership at the subnational level is therefore less about directing industry and more about aligning regional systems with realistic enabling industry trajectories. When governments understand the operational and economic realities of the sector, they are better placed to stage infrastructure, coordinate land use, reduce friction points and signal long-term policy stability. That alignment is what ultimately crowds capital in and strengthens regional resilience.

Three priorities stand out.

Infrastructure resilience. Road, rail, port and energy reliability are preconditions for remote commercial operability. Many critical minerals projects are located in sparsely populated regions with limited logistics redundancy. A single transport corridor, port, or energy supply pathway can represent a point of failure. Disruption, whether from extreme weather, industrial action or supply chain breakdown, can render projects uneconomic.

State and territory governments are central to strengthening this resilience. Coordinated infrastructure investment, particularly in common-user corridors and multi-user facilities, reduces duplication and lowers barriers to entry for smaller operators. Where appropriate, public co-investment can catalyse private capital and accelerate cluster formation.

Energy resilience is particularly important. Processing and refining are energy-intensive. Reliable, competitively priced energy from decentralised renewable systems, microgrids, or hybrid models can transform the viability of downstream activity in remote regions. Investment in transmission, storage and alternative energy pathways is therefore not an environmental add-on; it is an industrial enabler.

Regulatory simplification. Regulatory certainty is as important as regulatory integrity. While Australia rightly maintains high environmental and social standards, duplication and misalignment between Commonwealth and state processes create delay, cost and investor uncertainty.

Alignment of standards and approval processes between jurisdictions would reduce duplication without lowering safeguards. Greater interoperability of data systems, clearer delineation of responsibilities and predictable timelines would enhance investor confidence while preserving community protections.

Local governments also play a crucial role in land-use approvals, community consultation and provision of services. Early engagement between project proponents and local councils can reduce friction and ensure that infrastructure, housing and community services are sequenced appropriately.

Regulatory reform should focus on simplification and coordination rather than layering additional compliance frameworks. Complexity does not automatically equate to higher standards; in some cases, it simply redistributes cost without improving outcomes.

On a global stage, a critical minerals platform in Australia has no room for sustainability failures. This is not about enumerating every available (or permutation of) ESG standard, but a genuine focus on real risks in an industry that is fast growing, and intersects with regional communities, regional biodiversity and heritage, and is subject to competition in land use from viable existing industries as well as emerging value-add industries.

Cumulative risk management. Regions hosting multiple niche critical minerals projects require coordinated oversight beyond individual project approvals. Commodity saturation or simultaneous project failures can destabilise local economies. For example, if several projects in the same commodity class are exposed to a sudden global price correction or technological substitution, the regional impact can be severe.

State and territory governments are uniquely positioned to assess cumulative risk across sectors and commodities. Strategic regional planning should evaluate exposure to single-commodity dependence, labour-market saturation, supply chain risk and infrastructure stress. Where appropriate, diversification strategies and cross-sectoral development pathways should be encouraged.

Cumulative risk management also extends to social and environmental pressures. Housing shortages, rising living costs and strain on local services can generate community resistance even where individual projects are compliant. Coordinated oversight ensures that the total development footprint remains within the region's absorptive capacity.

Communication is central. Cumulative regional impacts across the critical minerals sector may not be visible within the footprint of any single project. Infrastructure strain, housing pressure, workforce distortion, supply chain concentration and service capacity challenges often emerge at the ecosystem

level rather than the project level. In these circumstances, the responsibility to assess, aggregate and communicate risk rests with the Government.

This requires more than internal policy design or assumed duty-of-care frameworks operating within departments. It demands a governance shift at the State and Territory level toward transparent regional engagement on long-term cumulative risks. Where multiple projects, incentives and policy settings interact, regions need clarity not just on opportunity, but on sequencing, trade-offs and system capacity.

At times, governments can appear to be “rolling out” strategic priorities to regions, emphasising announcements and investment pipelines, rather than embedding accountability mechanisms that rigorously assess cumulative exposure. Effective governance is not marketing. It is the structured communication of risk, constraints, and mitigation pathways, particularly when regional businesses, workforce resilience, and supply chain stability are affected.

When political cycles or partisan dynamics crowd out serious engagement on cumulative risk, it is not for academia to resolve the gap. The obligation to communicate clearly and to align ambition with capacity sits squarely with regional governments.

Importantly, communicating risk is not about amplifying alarm. It is about testing whether the regional ecosystem can manage that risk. Supply chain concentration, workforce availability, housing stock, infrastructure redundancy and service resilience must all be assessed alongside growth projections. Transparency, when done responsibly, can strengthen capability: regions that understand the scale and timing of pressures are better placed to adapt, invest and coordinate. Managed carefully, this reduces volatility and builds durable resilience, without creating unnecessary bandwagons or speculative escalation.

In short, genuine de-risking requires visibility at the system level. Transparent communication, coupled with capacity testing and accountable governance, is what turns strategic ambition into sustainable regional outcomes.

Stable, long-dated industries form the foundation upon which higher-risk emerging sectors can grow—established sectors, such as agriculture, energy, traditional mining and logistics, anchor regional economies. Governments must ensure that the emergence of critical minerals complements rather than destabilises these foundations. Displacement of existing industries or workforce competition that undermines essential services would weaken, not strengthen, regional resilience.

Ultimately, state, territory and local governments are the connective tissue between national strategic ambition and regional reality. Their capacity to plan holistically, invest strategically and coordinate across sectors will determine whether critical minerals become a source of durable regional prosperity or another cycle of volatility.

If managed well, critical minerals can reinforce regional ecosystems, strengthen infrastructure resilience and diversify economic bases. If managed poorly, they risk amplifying fragility. The difference lies in coordination, foresight and a commitment to long-term stability over short-term momentum.

6. Coordination Between Jurisdictions and the Commonwealth

Improved coordination between the Commonwealth, states, territories and local governments should focus on simplification, clarity and strategic alignment rather than additional layers of oversight. Australia does not suffer from a lack of regulatory architecture; it suffers from fragmentation within it. Overlapping processes, duplicative reporting, and sequential rather than integrated approvals create delays, costs, and uncertainty, without necessarily improving environmental or social outcomes.

Misalignment between Commonwealth environmental processes, state-based approvals regimes and local planning frameworks can significantly extend project timelines. In capital-intensive sectors such as critical minerals, where market windows can open and close rapidly, delay results in a strategic disadvantage. Investors require predictability not only in standards but also in processes. Uncertainty increases financing costs and undermines Australia's competitiveness relative to jurisdictions with more streamlined frameworks.

Greater interoperability of data systems, harmonised reporting requirements and clearer delineation of responsibilities would materially improve investor confidence and regional predictability. Tenure and tenement systems are appropriately state- and territory–based platforms and will remain so. The objective is not centralisation, but better alignment where regulatory responsibilities overlap.

In practical terms, coordination is most achievable in areas such as GIS mapping, Matters of National Environmental Significance (MNES) assessments, biodiversity datasets and broader environmental zoning layers. Shared spatial platforms and interoperable datasets can reduce duplication, improve transparency and provide proponents and communities with a clearer line of sight across Commonwealth and state requirements.

Water management presents a more complex challenge. Allocation systems, hydrological data and cumulative impact modelling are often jurisdiction-specific and politically sensitive. Improved data transparency and interoperability would support planning. However, reform in this space must account for local water governance arrangements, risk of coercion, and community expectations.

Data security is another consideration. As critical minerals become strategically significant, some geological, environmental and operational data may carry commercial or national security sensitivities. Interoperability must therefore be designed with appropriate safeguards, ensuring that transparency for planning and regulatory efficiency does not compromise commercially sensitive or strategically relevant information.

This approach does not imply lowering standards or collapsing jurisdictions. It implies reducing unnecessary duplication, improving sequencing and enabling better-informed decision-making across levels of Government — while respecting state tenure systems, water governance frameworks and data security requirements.

Clarity of accountability is equally important. Investors and communities alike benefit from knowing which level of Government is responsible for which decision. Fragmentation can create gaps where no authority feels fully accountable, or overlaps where responsibilities blur. A more integrated approach, through formal intergovernmental agreements specific to critical minerals, could enhance coherence while respecting constitutional divisions.

Coordination should also extend beyond approvals to strategic infrastructure planning—particularly in Northern Australia, where defence posture, energy development and critical minerals supply chains increasingly intersect. The convergence of defence infrastructure upgrades, renewable energy investment and mineral processing presents an opportunity for integrated planning. Ports, airstrips, energy corridors and digital networks can serve dual-use purposes if sequenced strategically.

Without coordination, Australia risks underutilising infrastructure or building parallel systems that do not maximise economic and security returns. A coherent approach would align national defence strategy, energy transition planning and critical minerals development within a unified regional framework. Northern Australia, in particular, should not be viewed through isolated policy silos, but as an integrated strategic ecosystem.

7. Additional Matter: Supply Chain Provenance and Traceability

International markets, particularly in the European Union, are moving toward greater traceability requirements, including digital “battery passports” and broader supply chain provenance systems. While often framed in ESG and transparency terms, these measures sit squarely within an evolving trade policy landscape. Traceability is no longer simply a disclosure mechanism; it is increasingly becoming a condition of market access.

As carbon border adjustment mechanisms, due diligence laws, and import compliance regimes expand, provenance requirements can operate as de facto trade hurdles. They shape who can sell, under what conditions and at what cost. For producers, especially those seeking entry into premium or regulated markets, the compliance burden is not marginal — it affects financing, contracting, data systems and certification pathways from the outset.

In this environment, provenance becomes more than a reputational asset; it is a strategic and commercial necessity. Supply chains that cannot demonstrate verified origin, emissions intensity and labour standards risk exclusion or price penalties. Conversely, jurisdictions that can credibly demonstrate high standards and system-wide integrity gain leverage in a politicised trade environment.

The key issue, therefore, is not simply transparency. It is how sustainability-linked traceability is being embedded into trade architecture. For policymakers and industry alike, this demands planning and aligning domestic regulatory settings, data infrastructure, and certification systems with emerging import requirements before they crystallise into binding barriers.

However, provenance systems must be approached with caution and strategic discipline.

While transparency can strengthen market differentiation and reassure allied partners, poorly designed or fragmented systems risk imposing disproportionate compliance burdens, particularly on small and remote operators. If layered onto already complex regulatory environments without a clear economic benefit, provenance regimes can undermine competitiveness rather than enhance it.

Four risks warrant attention.

First, increasing compliance costs for small and remote operators. Many individual critical minerals projects are niche, capital-constrained and geographically isolated. Additional digital reporting platforms, audit requirements and verification processes can create barriers to entry and consolidate advantage among larger incumbents.

Second, diverting resources from meaningful local engagement. Companies operating with limited budgets must prioritise. Excessive compliance complexity can divert attention and capital from workforce development, community partnerships, and local procurement, ironically weakening the very social licence that provenance systems are often designed to support.

Third, creating cyber and data risks for regional businesses. Centralised digital traceability platforms, if inadequately secured, may expose commercially sensitive information or operational data. In a sector of strategic importance, cyber resilience must be integral to any provenance architecture.

Fourth, reinforcing centralised, city-based compliance ecosystems at the expense of regional autonomy. If expertise and system control are concentrated in metropolitan centres, regional actors may become passive data providers rather than active participants in governance.

If Australia chooses to pursue national provenance systems, it must do so in a coordinated and proportionate manner, avoiding fragmented state-level approaches and ensuring scalability for smaller operators. A nationally harmonised framework, aligned with key export markets and designed with industry input, would reduce complexity and improve interoperability.

Provenance can support social licence, but it cannot substitute for it. Social licence is strengthened by genuine local engagement, economic participation and transparent governance, not by compliance architecture alone.

8. Conclusion

Critical minerals are central to Australia's economic security and geostrategic posture. They underpin emerging defence technologies, renewable energy systems, advanced manufacturing and digital infrastructure. In an era of systemic competition and weaponised interdependence, control over reliable and ethical supply chains is a strategic imperative.

But projects will only endure if they are locally legitimate and regionally transformative. Economic development and social licence are not parallel tracks to be balanced; they are interdependent foundations of durable industry formation. Where communities see tangible opportunities, jobs, skills, infrastructure, and long-term partnerships, social licence strengthens. Where development is extractive or episodic, legitimacy erodes.

A durable critical minerals industry in Australia requires:

- Locally grounded engagement and governance that embeds projects within regional communities.
- Value-add pathways and industry clustering that move beyond extraction and build sovereign capability.
- Workforce localisation and liveability investment that convert projects into generational opportunities.
- Infrastructure resilience and regulatory simplification that enhance competitiveness without lowering standards.
- Strategic coordination across jurisdictions that aligns defence, energy and industrial planning.
- Careful calibration of emerging compliance regimes, including provenance systems, to ensure proportionality and economic benefit.

If Australia gets this right, critical minerals can anchor a new phase of regional development, particularly in Northern Australia, strengthening national resilience and diversifying economic foundations in an era of heightened geopolitical uncertainty.

If we get it wrong, we risk constructing a sector that is technically compliant but socially brittle, economically volatile and strategically fragile, dependent on favourable market conditions and vulnerable to community resistance or international competition.

The task before this Committee is therefore not simply to examine projects or regulatory processes. It is to help shape the governance model that will determine whether critical minerals become another short-lived commodities narrative, or a pillar of Australia's long-term economic security and national future.