

**To: Ai Group, on behalf of the Department of Employment,  
Small Business and Training**

**Re: Queensland Resources Workforce and Skills Questions**

19 May 2023

## Introduction

AMEC appreciates the opportunity to provide a submission to Ai Group, who is undertaking consultation on behalf of DESBT regarding resource sector workforce and skills issues.

## Recommendations

- Further time is allowed for considered and meaningful consultation on this crucial issue.
- Any action undertaken by the State integrates with the Commonwealth and action, for example the Employment White Paper, the Diversity in STEM Review, and the newly established National NetZero Authority.
- That DESBT broaden their perspective of the resources sector, AMEC believes that the questions posed are not inclusive of each critical phase and associated process of the mine life cycle – from exploration to production.
- AMEC is aware that the Department of Resources and the Department of Energy and Public Works commissioned PwC to complete analysis of the resources and energy transition skills and workforce needs; this work was completed in 2022 and as far as AMEC is aware, was not made public. It is recommended that DESBT consider this work in forming any plan.
- To understand the value of current Queensland Government supported programs – e.g., Queensland Future Skills Partnership (QFSP) and the Queensland Minerals and Energy Academy (QMEA) – a performance review is complete to understand their impact and the gaps that need to be filled to grow a future facing resources workforce.

## About AMEC

The Association of Mining and Exploration Companies (AMEC) is a national industry association representing over 540 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 2020/21 Industry generated a record high \$301 billion in mining exports, invested \$3.2 billion in exploration expenditure to discover the mines of the future, and collectively paid over \$43.2 billion in royalties and taxes.

AMEC's Queensland members, of which there are more than 70, explore for, develop and produce minerals including antimony, bauxite, coal, cobalt, copper, gold, graphite, lead, lithium, manganese,

mineral sands (e.g., silica), molybdenum, nickel, phosphate, rare earths, silver, tungsten, vanadium and zinc.

### General Comments

The commitment to develop a Queensland Resources Industry Workforce Plan, was released publicly as an action in the Queensland Resources Industry Development Plan in June 2022, to be delivered within the 2022-23 financial year. Based on the process that DESBT are now attempting to implement prior to 30 June 2023, AMEC is concerned that the issue of resource sector skills and workforce is not being given the focus it requires, and that stronger alignment to parallel efforts being made by the Queensland Government to develop the industry is required.

### Mineral Exploration and Mining

Mineral exploration and mining directly employ over 274,000 people in Australia. In the four quarters to May 2022, the average number of people employed in Queensland Mining sector totalled 77,246, with a year-on-year growth of 1.3%. The Exploration part of the industry is thriving within this data, making up 26.5% of the jobs<sup>1</sup>.

The resources sector has a long history of providing lifelong career opportunities, with highly skilled workforces possessing transferrable, in-demand skills. The majority of roles offered within the sector provide opportunities for learning and development, both formal and on-the-job, and offer higher than average incomes.

Whilst the sector's preference is to provide local employment opportunities and develop a highly skilled local workforce, there are challenges in attracting suitably qualified or interested workers to the sector. The nature of work is often remote, can be labour intensive, and a large variety of roles will require fly-in-fly-out (FIFO) or drive-in-drive-out (DIDO) shift work arrangements.

Today (18 May 2023) on [www.seek.com](http://www.seek.com), there are 6,596 jobs advertised in the mining sector and 298 in exploration. It is a consistent pain point for AMEC's membership across the board for their operations at every stage of development. The labour shortage faced by the mining and mineral exploration industry and the associated support industries, is multifaceted, both a long-term and short-term constraint on growth, and demands a broad strategic response from State and Commonwealth Governments. The Olympics and post-COVID-19 recovery initiatives underway in Queensland with big infrastructure spends, means the skilled workers developing those projects are not available to the mining and mineral exploration sector.

Therefore, there will be a strong reliance on interstate and international workers who are willing to undertake these remote placements, as a pathway to development and migration. It is vital our sector continues to attract skilled migrants and workers, to bolster our local workforce. While recent announcement at the federal level regarding visa changes are supported, AMEC is already hearing concerns regarding where will new migrant workers be housed? A band aid solution will not support our economy and needs to be considered in an integrated way.

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<sup>1</sup> [Mining employment in Queensland](#)



The window of heightened demand we are in will not last forever, but if action is taken now, the skills shortage can be addressed. The development of transferrable skillsets for employment opportunities across the sector can continue to support a well-resourced future Australian industry.

### Specific comments

#### DESBT have asked:

##### **Workforce Participation – focus on diversity.**

1. Q: Are there any existing programs that you are aware of that have proven to be effective in the attraction and retention of underutilised cohorts? If so, what are the key components that make that program successful?
2. Q: Do you have any experience or suggestion of other programs that could be effective in attracting and retaining underutilised cohorts? If so, can you please describe them?
3. Q: What are your support mechanisms for migrant workers to effectively integrate into an existing workforce? How do the skills of these workers get captured and maximised?

##### **Local solutions – focus on Workforce diversity programs, with particular focus on First nations communities, migrants, women, people with disabilities etc and any cross-industry partnership opportunities.**

4. Q: Are there any existing workforce diversity programs that you are aware of that have proven to be effective in the attraction and retention underrepresented? If so, what are the key components that make that program successful?
5. Q: How do you think the mining and resource sector could increase the attraction of underrepresented cohorts?
6. Q: What other industries in your local region has programs that are focussing on the same style of programs? Do you think there could be an effective partnership model implemented with them?

### Underutilised cohorts

Women are a major underutilised cohort in the resources sector. Across Australia's mining sector, it is estimated approximately 20% of roles are held by women, this statistic holds true also for Queensland. Data shows that the proportion of women / under-represented groups who hold on-site leadership roles is even lower.

There is opportunity to gain a more transparent understanding of the actual figures of representation across our workforce, both in head offices and in leadership positions onsite, through increased data collection and analyses. An option to gather this data is to expand the current workforce data collected by the safety regulator, Resources Safety and Health Queensland (RSHQ). There is ample opportunity to enhance their data collection and analyses, without duplicating reporting requirements or frameworks.



Reflecting on the findings and recommendations from the Enough is Enough Report in Western Australia, the provision of safe workplaces for our workers, is the top priority. Culture emerged as a strong theme across the Inquiry, and can influence attraction, retention, and overall employee satisfaction. There was recognition within the Western Australian Government and industry of the need to develop strong leadership programs to empower frontline leaders to effectively lead and manage teams. While this level of inquiry into the treatment of women in the resources sector has not been undertaken in Queensland, the principle of a safe workplace is fundamental and borderless.

AMEC is aware that the resources industry broadly is learning from the WA experience and there is industry leadership being displayed through a range of initiatives to increase physical and psychosocial safety, reporting, leadership and training development, access to safety and human resources staff, and work models. A key driver being to ensure women and diverse groups continue to welcome opportunities to work in this sector. RSHQ are also developing mechanisms and guidance on this, which will support the sector.

Flexible rostering is another mechanism that has been used successfully, specifically where a resources project is co-located with a regional town. Under this scenario, a mine runs a shortened roster to improve the participation of parents. Rostering for a mine site, especially those that run 24 hours, is usually done in two 12-hour swings. Under the scenario of a flexible roster, shorter days, e.g. 9.30am – 2.30pm, is run and has proven to attract women in particular, back into the workforce in small regional towns adjacent to mines, typically where child care options are limited.

#### **Lower the barrier for returning workers**

Further attention is needed to lower the barriers for workers to return to the workforce. For example, adjustments to the Commonwealth pension scheme will make it easier for retired workers to reconsider offers to return to employment. Consideration of reframing the asset and income tests for the pension so that workers can be encouraged to return to work without fear of losing their pension would be beneficial. It would also attract skilled workers back into the workforce, to ease the burden currently experienced through a limited pipeline of suitably qualified workers. Queensland could review the mechanism currently within their jurisdiction that might have the same impact.

#### **First Nations participation**

The resources sector has an excellent history of engaging with and employing locally based First Nations people. While this may not be done in a coordinated program fashion, there is leadership being displayed broadly through the forms of scholarships, education, work/country-based skilling, and long-term careers based on country.

#### **DESBT have asked:**

#### **School to work Transitions – focus on Vet in School, GISP, and any other programs.**

7. Q: Are there any programs that you are currently aware of in the school curriculum that are effective in increasing the awareness of the mining and resource sector and showcasing the



career pathways available once working in the sector? If so, what are the key components that make that program successful?

8. Q: If there any other programs/suggestions you are aware of, that can be implemented in a primary or secondary school environment that may lead to increased numbers of students wanting to enter the sector, can you please describe?
9. Q: How can the mining and resource sector work more collaboratively with education facilities and training providers to develop and support the skills needed for higher value jobs within the sector?

### **QMEA and QFSP**

The QMEA and QFSP are two programs that AMEC is aware that fit this. Their performance, as far as successful transition of those exposed to the programs into the resources sector specifically, however, appears to be largely anecdotal. Hence the suggestion to review the performance of these.

Specifically with regard to Q9, AMEC suggests it is the rigidity of State Government institutions that would be a barrier to allowing industry to engage more deeply with school aged children and young adults. Support from the top down, and ease to be able to engage in a safe and appropriate way need to be considerations of the departments that govern this and provide schools with the ability to be empowered to act upon offers from industry.

Further, community acceptance of mining is required for this to be done successfully. The Queensland Government has a key role to play in ensuring our communities—in SEQ and regionally—understand the important role of the resources sector in the journey to decarbonisation and energy transition. Currently this is not being done effectively. If the community understands the paradigm accurately and families are having positive conversations at home about mining, this will influence the decisions of children and young adults about their education and career choices.

### **Challenges that increased focus via STEM in schools could help address**

The role of the mining industry in meeting decarbonisation targets, is a message that is consistently spruiked by this government, federally and globally. Yet there is still a negative public perception that needs urgent addressing, that mining leads to negative environmental outcomes. Together, Government and industry must continue debunking this myth.

Queensland's mineral exploration and mining sector is one of the most stringently regulated jurisdictions domestically and internationally, achieving robust environmental, social and governance (ESG). Prior to any mineral exploration commencing, proponents undergo extensive consultation and studies to ensure legislative and regulatory frameworks have been complied with, and risk management principles will be adhered with. There is a strong need to bolster this messaging, as global competition for limited investment becomes more challenging to secure, and potential workers look for career pathways that align with stronger community expectations. The industry has and continues to shift, as we rapidly progress towards net zero targets.

Every single mine began with mineral exploration. The discovery of the mines of the future, at a rate that is faster than existing resources are being depleted, and at an optimal cost, is a challenging



balancing act. With discoveries being made at greater depth, the cost to discover these mineral resources, and associated costs to extract and process the minerals, increase the cost and risk profile. These ongoing challenges will require continuous innovation and STEM expertise, to ensure Australia's base and critical minerals supplies continue to provide the world with the vital minerals and economic resources needed.

There are two, ultimately scientific, challenges for modern mineral exploration: find economic deposits that are deeper and under thicker cover; and do so with the least amount of ground disturbance possible.

There is ample opportunity for scientific developments to streamline the rate of discovery, and the timeframes to develop minerals projects into producing mines. Automation, cyber technologies, and data are expected to play an even greater role in the geological, chemical and metallurgical aspects of the minerals sector. Understanding the opportunities, uses for, and how we can more rapidly implement these advancements into our operations, will undoubtedly better-position Australia's mineral explorers to be more cost-competitive, as existing mineral resources are being depleted at a faster rate than new discoveries are being made.

The role of STEM in driving these opportunities forward, cannot be understated. The roles will continue to develop scientific and automation expertise, increasing workforce flexibility and adaptability, which has typically been a barrier to participation and development. There is very limited education of this within schools and this signals that there is immense opportunity for the Queensland Government to future proof Queensland students with knowledge and skills for the future.

**DESBT have asked:**

**Workforce attraction and retention – focus on skills development programs and support upskilling for existing workers and support job redesign opportunities.**

10. Q: What are the key skills required to support existing workers that are needing to consider transitioning their core job functions due to the shift in roles due to technology advancement in the sector?
11. Q: How do we successfully deliver training to ensure skills are improved and a great working culture is maintained?
12. Q: If there any other programs/suggestions you are aware of, that can support existing workers to confidently upskill, please describe.

This question is not considerate of the broad depth of careers that the resource sector has. It reflects that there is a severe lack of understanding of the resources sector workforce and the skills required to take a prospect from exploration to production. The sector is not homogenous, and this requires significant analysis.



AMEC is aware that the Department of Resources and the Department of Energy and Public Works commissioned analysis of the resources and energy transition sector, the current skills base, and the future projected skills. This work was completed in 2022 and informed to some extent, the Queensland Energy and Jobs Plan. It is recommended that DESBT consider this work in answering this question.

**DESBT have asked:**

**Skilling Queenslanders now and into the future – focus on developing diversity programs, partner with stakeholders to increase skills at a higher education level (including higher-level apprenticeships), identifying trends that will impact and influence the emerging workforce and supporting change management to ensure effective working culture.**

13. Q: Have you seen any effective leadership programs that support key staff to increase diversity and inclusion in the workplace? If so, can you please describe?
14. Q: How do we effectively educate existing staff of the future trends that will impact the current roles with the sector?
15. Q: How do we engage and gather feedback from existing staff about the training requirements and delivery models of higher-level education that will be required into the future?

AMEC believes that responses provided above largely answer these questions as they are iterative of those already asked.

**Final Comment**

AMEC hopes that the recommendation to undertake considered and meaningful consultation on this crucial matter is pursued by DESBT and that the department does not rush this process.

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