



# MINERALS COUNCIL OF AUSTRALIA

SUBMISSION TO THE LEGAL AND CONSTITUTIONAL  
AFFAIRS REFERENCES COMMITTEE INQUIRY INTO THE  
EFFECTIVENESS OF THE CURRENT TEMPORARY  
SKILLED VISA SYSTEM IN TARGETING GENUINE SKILLS  
SHORTAGES

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7 DECEMBER 2018

## TABLE OF CONTENTS

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1. EXECUTIVE SUMMARY .....	3
2. AUSTRALIA'S WORKFORCE TODAY AND TOMORROW .....	4
A highly skilled, high wage workforce .....	4
A global employer of skilled labour .....	4
Links between temporary and skilled migration.....	5
Industry's workforce of the future.....	6
3. TARGETING GENUINE SKILLS SHORTAGES .....	7
Leveraging investment in higher education and training .....	7
Current state of play in minerals higher education and training.....	7
How skills shortages are determined .....	9
The Skilling Australians Fund .....	10
Labour market testing .....	11
4. CONCLUSION.....	12

## 1. EXECUTIVE SUMMARY

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Access to foreign workers for the mining industry is a small but critical component for the competitiveness of Australia's resources sector. The current temporary skilled visa system creates delays and disincentives that undermine that competitiveness. As the Productivity Commission concluded in its assessment of the economic, social and environmental impact of migration, immigration brings net benefits across the Australian community, noting that:

[O]ver the long term, selecting migrants with higher rates of workforce engagement and employment in skilled and high demand occupations is likely to deliver improved economic outcomes.<sup>1</sup>

As a discerning and strategic employer of skilled migrants, this finding strongly aligns with the experience of the Australian minerals industry. The MCA agrees that policy underpinning skilled migration should be evidence-based and informed by the appropriate mix and influence of economic, social and environmental factors.<sup>2</sup> Accordingly the MCA considers that some parameters of the current temporary skilled visa system are not wholly effective in targeting genuine skills shortages, as they restrict the mining industry's access to skilled employees and hinder its competitiveness.

As opportunities across the minerals industry continue to grow, an additional 900 mining engineers are expected to be employed domestically up to 2022, with an estimated demand for up to 5000. Additionally, the specialists skills associated with innovation and technology adoption will influence skill needs and shape demand across industry.

Given the current and projected pipeline of enrolments and graduates in mining engineering and related disciplines, access to skilled migrants is critical to respond to the immediate divide between supply and demand over the next 12 months. Delays in recruiting critical workers on temporary visas will not only impact overall competitiveness, it will also delay developments and the creation of permanent positions for Australians.

Therefore the MCA recommends:

- Dropping the arbitrary upper age limit of 45 years at time of application for permanency to ensure that industry is able to secure knowledge experts, senior managers and leaders (including chief executives) for key positions to aid Australia's competitive advantage in the sector
- Removing the three years' work experience requirement for international students graduating from Australian universities, to transition from a temporary graduate visa to industry – and securing the skills industry needs now
- Placing Mining Engineering on the Short-term Skilled Occupations List (STSOL) to address the immediate need across industry and provide a genuine pathway toward permanent residency for graduates
- Allocating funds from the Skilling Australians Fund proportionally to each industry's use of the temporary skilled migration visas to support skilling and upskilling for that and ancillary industries, and address potential and perceived cross-subsidisation of other industry sectors
- Strengthening application of the Skill Shortage Research Methodology, including application of ANZSCO codes to the sixth integer, to address discrepancies that lead to false or inconsistent findings
- Abolishing labour market testing to remove the unnecessary and ineffective administrative requirement and recognise the well-established and historically consistent industry practice of seeking skilled migration as a last-resort means of obtaining critical but hard-to-fill skills.

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<sup>1</sup> Productivity Commission [Migrant Intake into Australia](#) Inquiry Report No. 77, 13 April 2016, p16.

<sup>2</sup> Productivity Commission [Migrant Intake into Australia](#) Inquiry Report No. 77, 13 April 2016, p16.

## 2. AUSTRALIA'S WORKFORCE TODAY AND TOMORROW

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### A highly skilled, high wage workforce

Mining in Australia is a sophisticated and technologically advanced enterprise that requires a highly skilled and adaptable workforce. The Australian resources sector employs around 245,200 people in high-value, high-wage, high-skilled jobs, mostly in remote and regional Australia. Average weekly earnings (full-time adult) in the resources sector are \$2,659 per week, more than 65 per cent higher than the national average of \$1,606 per week.<sup>3</sup>

Australia's resources workforce covers a range of scientific fields and professional occupations. The resources sector is the largest total employer of:

- Mining engineers (9460)
- Geologists and geophysicists (7312)m
- Industrial, mechanical and production engineers (11,180)
- Production managers (7656)
- Metallurgists and physicists (1962).<sup>4</sup>

Mining is also the third-biggest employer of environmental scientists, employing more than 9428 directly and indirectly.<sup>5</sup>

A large proportion of the workforce is highly skilled; 67 per cent hold a Certificate III level qualification or higher, above the national average.<sup>6</sup> More than four per cent of the workforce is currently apprentices and trainees.<sup>7</sup> One in five workers also hold a bachelor degree or higher.<sup>8</sup> The level of education within the workforce reflects the importance, value and ongoing need for trade and professional occupations to the mining industry.

### A global employer of skilled labour

An employer of Australian's first and foremost, the minerals industry is discerning in its engagement of skilled migrants, leveraging skilled migration to address 'hard to fill' experienced professional roles. Approximately 0.4 per cent of the workforce is secured through temporary skilled migration, accounting for only 1.2 per cent of all temporary skilled workers in Australia (see Chart 1).<sup>9</sup>

The profile of Temporary Skills Shortages TSS visa (and its predecessor the 457 visa) holders in the minerals sector are overwhelmingly professionals, managers and tradespeople (which collectively make up over 90 per cent of TSS visa users) who receive an average total remuneration of \$204,700 per annum.

Given the need for skilled personnel with specific experience, the cyclical nature of the industry and the prospect of substantial numbers of retirements from the sector, TSS visa holders are a small but important component of the mining workforce. Ensuring that the system in place is flexible, functional and targeted to/ effective for genuine skills shortages is critical to maintaining the competitive advantage of the future minerals industry.

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<sup>3</sup> Australian Bureau of Statistics, [Labour Force, Australia, Detailed, Quarterly, Aug 2018](#), ABS cat. no. 6291 0.55.003, released on 20 September 2018. [Average Weekly Earnings, Australia, May 2018](#), ABS cat. no. 6302.0, released on 16 August 2018.

<sup>4</sup> Department of Jobs and Small Business, [Job Outlook](#); MCA calculations, viewed 30 November 2018. NB these figures are estimates of the total number of workers directly and indirectly employed by the resources sector.

<sup>5</sup> Ibid.

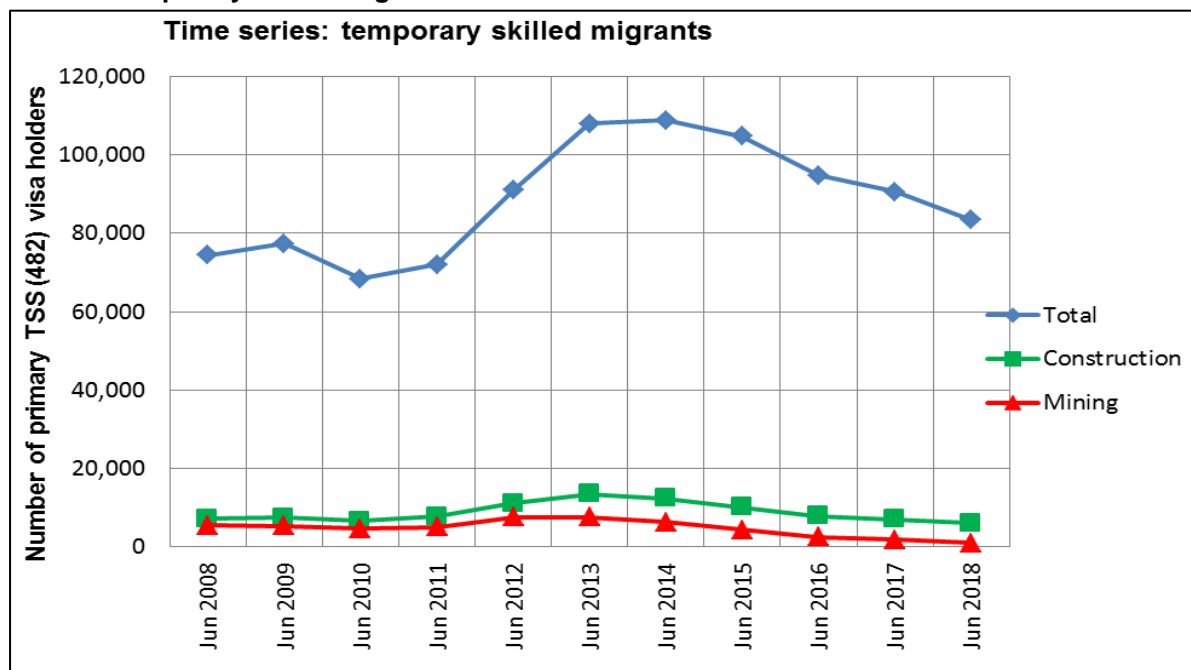
<sup>6</sup> Minerals Council of Australia, [Miners at Work](#), Canberra, 2018; and Australian Bureau of Statistics, 2016 Census, [Census Table Builder – Highest Level of Educational Attainment and Industry of Employment](#), viewed 30 November 2018.

<sup>7</sup> National Centre for Vocational Education Research (NCVER) – [Apprentice and trainees 2018 – March Quarter](#) (released 3 September 2018).

<sup>8</sup> Department of Education, [Industry Outlook: Mining](#), Canberra, 2014; and Australian Bureau of Statistics, 2016 Census, [Census Table Builder – Highest Level of Educational Attainment and Industry of Employment](#), viewed 30 November 2018.

<sup>9</sup> Department of Home Affairs, [Temporary resident \(skilled\) report](#), 30 June 2018.

**Chart 1: temporary skilled migrants 2008 – 2018**



Data Source: Department of Home Affairs

### Links between temporary and skilled migration

The minerals sector also sources permanent skilled migrants both directly and through the conversion of temporary migrations to skilled migrants. The phenomenon of former 457 visa holders settling well into their roles in the Australian minerals sector and then applying for permanent resident status is not uncommon. However, the arbitrary upper age limit of 45 years at time of application for permanency acts as a deterrent to both the industry and the applicant preventing knowledge experts, senior managers and leaders (including chief executives) from taking up key positions to aid Australia's competitive advantage in the sector.<sup>10</sup>

This is further exacerbated by the lack of certainty for both visa sponsors and approved temporary skilled visa holders of their longer term prospects when the associated occupations move on, off, between and/or off both the Medium and Long-term Strategic Skills List (MLTSSL) and the Short-term Skilled Occupations List (STSOL).

A further complication exists for international students studying full-time at Australian universities in minerals-related disciplines. The temporary graduate visa (subclass 485) is for international students who have recently graduated from an Australian educational institution. It lets them live, study and work in Australia temporarily after they have finished your studies. Students are only able to access the Temporary Graduate visa (subclass 485) once as a primary applicant and the length of the visa is 18 months.

The TSS visa requires three years' work experience as one of its criteria. Accordingly, international students studying mining engineering at an Australian university would not meet this experiential requirement to transition from a temporary graduate visa to a TSS visa in the industry and as such would have no pathway to permanent residence. Even if this pathway was available to students, mining engineering would have to be added to the STSOL (which it currently is not).

Encouraging meaningful and sensible links between temporary and permanent migration is also desirable where appropriate, so that skilled migrants are not lost to the economy and wider society.

For example, the MCA views the successful transition TSS visa medium term skilled migrants along a permanent migration pathway as positive, enhancing the permanent skilled migration stream. This is

<sup>10</sup> Minerals Council of Australia, [Submission to the Senate Select Committee on the future of work and workers inquiry](#) January 2018, p 14.

because successful temporary migrants have experienced Australian working life and are, as such, better equipped to settle into Australian working life and Australian society more broadly.

### **Industry's workforce of the future**

Technological innovation will continue to change the nature of work in mining and therefore skills requirements. The minerals industry is proactively assessing the composition of the future minerals workforce and the skills requirements considering the increasing role of automation, robotics and artificial intelligence that will see Australian mining continue to be at the forefront of innovation in the creation of new jobs.

Looking ahead, the industry's future prosperity will continue to depend on a professional and semi-professional class of highly skilled and technology-literate technical experts, including operators, engineers, environmental scientists, geologists, geophysicists, mathematicians and financial officers.

Australia's higher education sector together with modernised workplace relations and responsive skilled migration policy will play a vital role in ensuring the future workforce is equipped with the necessary skills for the mining jobs of the future.

Delivering a flexible and functional temporary skilled migration program remains a vital component of meeting the skills needs of the sector, especially as specialist skills associated with innovation and technology adoption increase.

### 3. TARGETING GENUINE SKILLS SHORTAGES

#### Leveraging investment in higher education and training

Training and workforce development are a crucial mechanism to ensure a supply of skilled workers enters and remains in the industry. The Australian minerals industry spends more on training per employee than most industry sectors (5.5 per cent of payroll).<sup>11</sup> In addition, the minerals industry makes a significant financial contribution to Australia’s higher education sector to ensure a high quality supply of Australian graduates.

Through the Minerals Tertiary Education Council (MTEC), the MCA supports collaborative initiatives at 17 universities across Australia. MTEC builds capacity in higher education in the disciplines of mining engineering, metallurgy and minerals geoscience and partners with universities and other providers to address the professional skills requirements in the minerals industry. MCA members have invested more than \$50 million of unencumbered funds over the past decade in these programs, benefiting more than 4,500 graduates.

In partnership with industry as well as through MTEC, MCA will continue to build on this significant investment in minerals workforce and training to develop new, innovative education programs to ready the future minerals workforce.

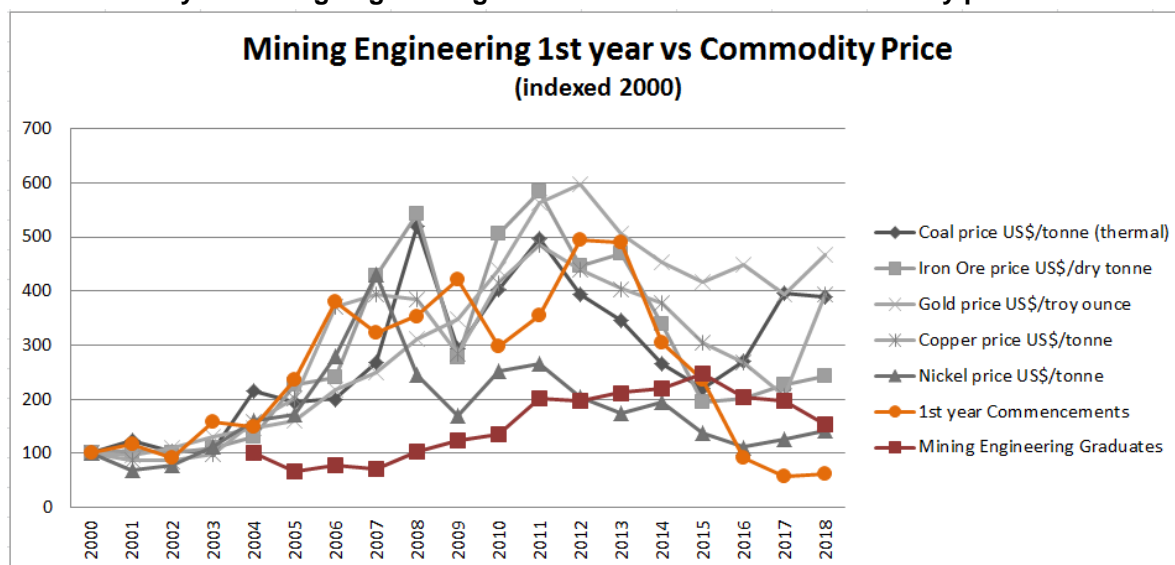
#### Current state of play in minerals higher education and training

Minerals higher education in Australia experienced strong growth in enrolments across minerals-related disciplines from 2004 to 2012, as a result of the unprecedented growth within Australia’s minerals industry. Since 2012, as the industry has transitioned from the construction to production phase, such demand contracted.

Decline in labour demand was exacerbated by falls in commodity prices in recent times, which in turn has impacted on the pipeline of new professionals in the key disciplines of mining engineering, metallurgy and minerals geoscience. Undergraduate intakes for most minerals higher education disciplines in Australia have experienced notable declines.

Mining engineering graduates, for example, lag the economic cycle by four years (the length of the degree). There is a strong correlation between commodity prices and mining engineering commencements (see Chart 2). The number of students commencing mining programs across Australia in 2018 show that enrolments continue a drastic downward trend to levels below those last seen in 2000 (see Chart 3).

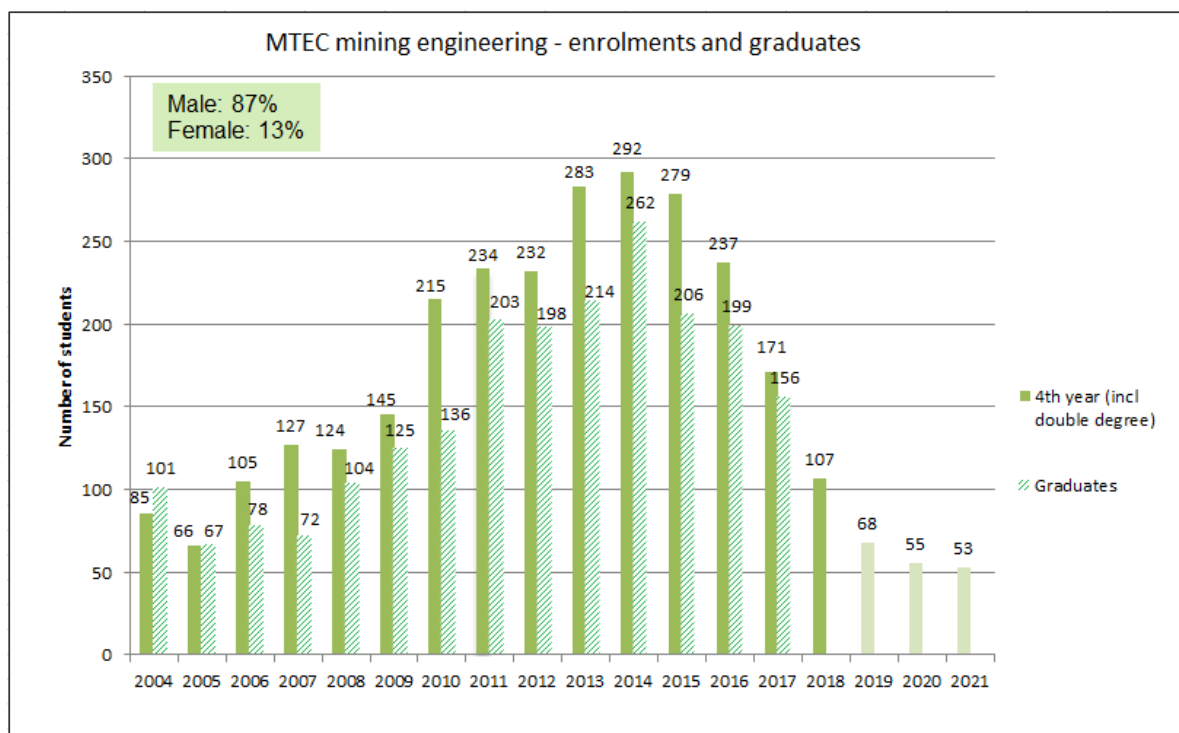
**Chart 2: First year mining engineering commencements versus commodity prices**



Source: MCA

<sup>11</sup> NCVET, [Training and education activity in the minerals sector](#), 20 March 2013.

**Chart 3: Mining engineering pipeline**



Source: MCA

The readjustment by many mining companies post 2012 resulted in a reduction of current and projected labour demand across mining disciplines and occupations.<sup>12</sup> An analysis of government labour demand data and MCA projected enrolments into minerals higher education programs suggests the decline in labour supply (enrolments in mining-related tertiary disciplines) will outpace future labour demand in critical technical areas, creating potential skilling issues downstream.<sup>13</sup>

For mining engineering the moving average trend for university completions from 2017 to 2020 is expected to decline by 81 per cent.<sup>14</sup> In the same period, labour demand is expected to decline by only 13 per cent.<sup>15</sup>

This is further evidenced through the Department of Jobs and Small Business employment data noting that the number of Mining Engineers grew moderately over the past five years and is expected to grow over the next five years from 11,000 in 2017 to 11,900 in 2022; with an anticipated 5,000 job openings over this time from workers leaving and new jobs being created. Simply, Australia will not have enough domestic mining engineers to meet anticipated growing demand (see Chart 4).

Ensuring the sustainable supply of graduates with the required skills is critical to the current and future prosperity to the minerals industry. The minerals industry will continue to require a broad base of talented professionals as the nature of work changes and is concerned at the dramatic reduction of commencements into mining engineering degrees at Australian universities in recent years.

While the MCA, through MTEC, remains committed to national collaborative programs in mining engineering, metallurgy and minerals geoscience – which continue to deliver an important pipeline of skilled professionals to the industry – a flexible and functional skilled migration system remains a priority mechanism to ensure the industry can access the skills it needs to meet ongoing demand.

<sup>12</sup> Department of Employment, *Employment Projections*, 2015.

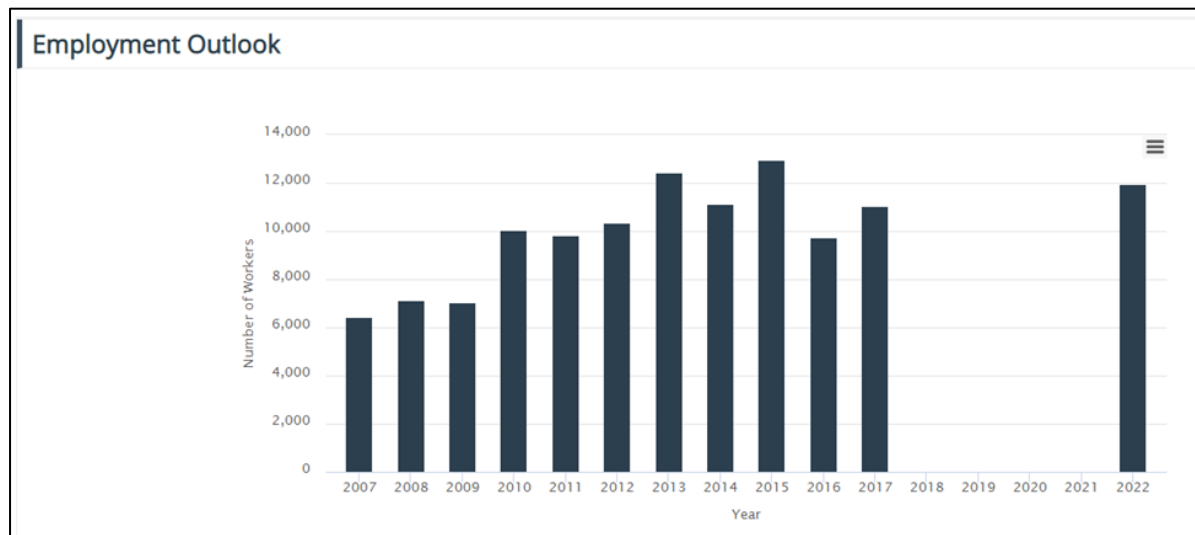
<sup>13</sup> Minerals Council of Australia, *Supplementary information for review of the 2016-17 Skilled Occupation List – Mining*, MCA, Canberra, 2015.

<sup>14</sup> Estimated from various MEA reports analysed December 2017.

<sup>15</sup> Department of Employment, *Employment Projections 2015*. Provided by Skilled Occupation List (SOL) Team during 2016-17 SOL Stakeholder Consultations.



**Chart 4: Labour force trend data and projections**



Source: ABS Labour Force Survey, Department of Jobs and Small Business trend data to May 2017 and projections to 2022.

### How skills shortages are determined

Despite the genuine skills shortage that exists and will persist, the Skills Shortage Report on Mining Engineers records no shortage in the current labour market rating.<sup>16</sup>

The MCA is concerned that the data being used to determine skills shortages is incomplete and notes a number of identified inconsistencies/ discrepancies within the Skill Shortage Research Methodology applied to determine shortages, including the consultation, the data used and application of ANZSCO codes.<sup>17</sup>

MCA, whose member companies account for more than 85 per cent of Australia’s annual mineral production and 90 per cent of mineral export earnings, is a significant voice on matters associated with industry related employment research, labour market needs and activity, and factors impacting skill needs. As such, the MCA expects to be heavily involved in any consultation process that seeks to consult on and confirm on findings related to these matters.

In considering the pipeline of mining engineers, the Skills Shortage Report relies on 2016 figures for student enrolments, which provide a figure of 211, almost 75 per cent below the level in 2012.<sup>18</sup> Current student enrolments sit below 50 (see Chart 2) which is less than one quarter of the figure used to help determine no shortage.

Based on status quo, industry requires a minimum of 200 mining engineers per annum to accommodate natural attrition (resignation and retirement). This does not include expansion of operations. In applying current enrolments and projected graduates, future shortfalls to accommodate natural attrition will grow from 100 in 2019 to 150 in 2020 and continue to increase in 2021 and beyond.

This suggests that there is a notable disconnect between the data obtained through the Skill Shortage Research and the data that is accessible and available through the MCA.

Given that the methodology identifies consultation with key associations is undertaken to discuss the findings of the research, the labour market more generally and factors impacting on skill needs, it is concerning to confirm that no efforts were made to consult with MCA throughout this important process.<sup>19</sup>

The MCA continues to actively work with industry, academia and government to advance considered, collaborative and consistent efforts and activity in securing the future minerals workforce. Noting that

<sup>16</sup> Department of Jobs and Small Business, [Skill Shortage Report – Mining Engineers](#), 2017, viewed 30 November 2018, p1.

<sup>17</sup> Department of Jobs and Small Business, [Skill Shortage Research Methodology](#), 2017, viewed 30 November 2018.

<sup>18</sup> Department of Jobs and Small Business, [Skill Shortage Report – Mining Engineers](#), 2017, viewed 30 November 2018, p4.

<sup>19</sup> Department of Jobs and Small Business, [Skill Shortage Research Methodology](#), 2017, viewed 30 November 2018, p4.

any strategy put in place will take a minimum of four to six years to yield noticeable results, it is critical for industry to have confidence in mechanisms such as the current temporary skilled visa system in its capacity to be effective for and responsive to industry skill needs.

Topics associated with the qualifications, skills and capabilities relevant to and required for the current and future workforce have had sustained attention and discussion across media, government, industry, academia and community. In particular there has been significant and sustained media attention on the growing skills shortage.<sup>20</sup>

These articles include warnings of impending shortages, the enrolments crisis that will see these shortages persist and the impact these shortages will have not only on industry, but the broader community as well. Noting that the methodology applied includes online canvassing of data on job vacancies, we would welcome clarification on how the intelligence across this media has been considered and applied in the determination of no skills shortage.

Finally, the current use of ANZSCO codes for mining is limited to the fourth integer, resulting in the grouping of mining engineers with petroleum engineers – disciplines that require different skills and interests.<sup>21</sup> This results in a misrepresentation of the true skills need in both of these disciplines.

MCA also seeks to clarify the ANZSCO codes applied to the determination of a skills shortage, versus the ANZSCO codes applied to the Medium and Long-Term Strategic Skills List.<sup>22</sup> Should there be a difference in the level applied, it is unclear how the status of skills shortage is accurate.

Any methodology that is applied needs to ensure that all the relevant industry voices are captured and considered, to secure and promote accurate findings. Had the MCA been consulted during this process, up to date figures and projections would have been provided, ensuring that the current labour market rating for mining engineers was determined through the application of relevant and accurate data.

### **The Skilling Australians Fund**

MCA advocates for “uninterrupted skills pathways,” regardless of business cycle. This means the funding and provision of quality training throughout the cycle, supported by industry and associated education and training institutions, supported by a valid policy base.

The minerals industry contributes significantly to the education and training of its workforce and by extension the Australian population more broadly when skills attained in our industry are transferred to other jobs in the broader economy. The industry sees its investment in areas of skills development in high demand areas and training initiatives with Indigenous and local employment as targeted and offering a mutually beneficial return on investment with the community.

The *Skilling Australians Fund* prioritises the funding of apprenticeships and traineeships in occupations that are in high demand and currently rely on skilled migration or have future growth potential, including in regional Australia.<sup>23</sup>

Apprenticeships and traineeships continue to be an important pathway into the minerals industry and a stable source of talent to meet current and future needs, as evidenced by the ongoing consistency in the number of apprentices and trainees year-on-year. Currently, apprentices and trainees make up 4.3 per cent of the minerals workforce – 900 per cent greater than the percentage of skilled migrants.<sup>24</sup>

Noting industry investment to training and education and commitment to apprenticeships and traineeships, along with the significance of industry to regional employment, the policy perspective

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<sup>20</sup> Google Search, [2018 articles on skills shortages in mining engineering](#), Google, viewed 30 November 2018.

<sup>21</sup> University of New South Wales, [What do mining and petroleum engineers do](#), School of Minerals and Energy Resources, viewed 30 November 2018.

<sup>22</sup> Department of Home Affairs, [Combined Current list of eligible skilled occupations](#), viewed 30 November 2018.

<sup>23</sup> Minister for Citizenship and Multicultural Affairs, [Explanatory Statement: Migration \(Skilling Australians Fund\) Charges Act 2018; Migration \(Skilling Australians Fund\) Charges Regulation 2018](#), viewed 30 November 2018, p4.

<sup>24</sup> National Centre for Vocational Education Research (NVCEr) - [Apprentice and trainees 2018 – June quarter](#), released 3 September 2018, viewed 30 November 2018.

and parameters of the levy imposed to raise revenue for the *Skilling Australians Fund* fails to achieve the demand-driven and industry-led imperative proposed.

While TSS visa holders are seen as a last resort, their contribution to our industry is highly regarded. It cannot be traded off to meet other governmental objectives, especially into a funding pool for which there is no guarantee that those funds will be invested back into our industry.

With the challenges of practical application and allocation of the fund, in particular the perceived cross-subsidisation of other industry sectors, the MCA suggests funds be allocated proportionally to each industry's use of the temporary skilled migration visas to support skilling and upskilling for that and ancillary industries.

To date, training outputs delivered through the fund have demonstrated no direct effect on the rate in which high demand skills for the industry are obtained. Our commitment in these areas however will continue regardless of industry use of the TSS visa program or access to the fund.

### **Labour market testing**

Given the high cost of sponsorship, the additional burden of the *Skilling Australians Fund* levy, resourcing impost and restrictions on industry in seeking skilled migrants to step into hard-to-fill, critical positions, their use is seen as a 'last resort' to respond to meeting industry skills needs. As such, when industry seeks to employ a skilled migrant, that action is undertaken with confidence that all other options have been exhausted.

Labour market testing continues to be an unnecessary and ineffective administrative requirement that will become more acute during an industry upturn, and should be abolished.

Delivering an effective migration system that is able to respond to not only current but future contingencies would be regarded by the MCA as good public policy. Given the immediate and medium term projections and the prospect of continuing professional and trades shortages, a reversal of the labour market testing policy, especially with regards to engineers, would be welcomed as one less obstacle to combatting skills shortages.

In periods where mining engineers are in acute demand, universities cannot respond fast enough in the short-term. For example, in the field of mining engineering, temporary migration visas outstripped university graduates by more than 2-to-1 between 2006-to-2010.<sup>25</sup>

Given the fact that use of the temporary skills visa system clearly responds to economic cycle in our industry, combined with the lack of reported abuses in our sector, there is a clear case for lifting labour market testing requirements in relation to occupations common in our industry.

It would be far more appropriate for Government to "manage by exception" in terms of applying labour market testing to "problem" sectors or occupations or dealing with abuses via other means.

## **4. CONCLUSION**

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The Minerals Council of Australia (MCA) welcomes the opportunity to contribute to the Legal and Constitutional Affairs References Committee inquiry into the effectiveness of the current temporary skilled visa system in targeting genuine skills shortages.

We continue to see an effective, flexible and functional skilled migration framework as more important than ever, so that relevant skills are available for and applied to projects and opportunities across industry, with TSS visas a vital option for both employers and employees.