

2022-23 ACT Budget Submission

Engineers Australia ACT Division

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1.0 Executive Summary

1.1 About Engineers Australia

Engineers Australia is the peak body for the engineering profession in Australia. We are a professional association with over 110,000 individual members, constituted by Royal Charter, to advance the science and practice of engineering for the benefit of the community. As Australia's signatory to the International Engineering Alliance (IEA), Engineers Australia maintains national professional standards that are benchmarked against international norms. This includes accreditation of university engineering programs.

1.2 Table of recommendations

Engineers Australia's recommendations concerning the 2022-23 ACT budget are focused on skills, education, and registration. While there are important additional areas not covered, we have identified these focus areas in collaboration with our local Canberra members as critical to engineering resilience at a time of uncertainty and engaging with the challenges facing the ACT.

Opportunity Area	Recommendations
Migrant engineers	<ul style="list-style-type: none">• All engineering occupations to be included on the ACT migration skills list.• More support provided to migrants and employers to help ensure their employment outcomes are as good as Australian-born workers.
STEM education	<ul style="list-style-type: none">• Increase teacher capability in science, technology, engineering and maths subjects and provide a better understanding of all STEM careers and learning, not just 'discovery' science.• Collaborate with industry, educational institutions and industry bodies to develop a detailed scope of future skills supply and demand. The danger of not providing relevant and effective training is a stagnating economy and reduced innovation which fails the community.
ACT Engineer Registration	<ul style="list-style-type: none">• Ongoing consultation with Engineers Australia to develop the registration legislation.• Implementation of the ACT Engineer Registration Scheme in 2023.

2.0 Migrant engineers

With the Australian Government predicting an increase in engineering jobs being created over the next five years, the requirement for skilled engineering migrants will exist for some time. At the 2016 census, 58.5% of engineers in the Australian engineering workforce were born overseas. There appears to be a frictional issue in that migrant engineers are significantly more likely than their Australian counterparts to be unemployed, underemployed or working outside the engineering profession. At the same time, engineering organisations are unable to find suitable engineers for their needs. It is believed this unemployed pool of migrant engineers could lessen the issues engineering organisations are facing in finding suitable candidates. The migrant engineers that our members have been able to place have been well received.

One of our members has over 500 Nepalese engineers connected on a private web-based community. They came to Canberra in response to the Government's skilled migration policies, but the great majority have been unable to obtain a job in the profession. One recently reported that he may have to leave Canberra over visa issues given that mechanical engineers are not included on the ACT Critical Skill List, although agricultural engineers are. The Australian Government Priority Migration Skilled Occupation List (PMSOL), since 2020, has identified Mechanical Engineer as one of the occupations filling critical skills needed in Australia. The Australian Government Skills Priority List, June 2021 shows the status of mechanical engineers in the ACT as being in shortage with strong future demand which is the highest category.

2.1 Recommendations

- **All engineering occupations to be included on the ACT Critical Skills List.**
- **More support provided to migrants and employers to help ensure their employment outcomes are as good as Australian-born workers.**
 - **This is especially important for those who arrive via the following pathways: Skilled independent, State/territory nominated, Regional.**
 - **It is also essential to apply a focus on women because overseas born female engineers have almost three times the unemployment rate of Australian born female engineers.**
 - **An economic benefit could be gained from additional forms of networking, introductions or internships for migrant engineers so that industry and government could benefit from an underutilised but highly skilled resource.**

3.0 STEM education

Engineers have the skills to translate new ideas into products and services that are commercially attractive and useful. Engineering and its continuous development over recent decades effectively uses knowledge of mathematics and science to solve real world problems. The expected future growth in engineering occupations within the economy over the next five years is set to exceed population growth by a factor of 1.63. Australia's capability to produce engineers begins at school. For the ACT to develop its own engineering workforce we need a sufficient flow of high school students who are interested in engineering and have studied the subjects that engineering relies upon, a firm grounding in science and mathematics.

3.1 Recommendations

- **Increase teacher capability in science, technology, engineering and maths subjects and provide a better understanding of all STEM careers and learning, not just 'discovery' science.**
- **Collaborate with industry, educational institutions and industry bodies to develop a detailed scope of future skills supply and demand. The danger of not providing relevant and effective training is a stagnating economy and reduced innovation which fails the community.**

4.0 ACT Engineer Registration

We welcome the ACT Government's commitment to implement an ACT Engineer Registration Scheme in the Territory and encourage continued rigour, urgency, and consultation to deliver the scheme in the next 12 months.

Engineers Australia has consulted on numerous engineer registration schemes across other States and Territories, and is well placed to provide guidance on the development of legislation and implementation of such schemes.

All registration systems have the same basic characteristics in that standards must be set, courses accredited, candidates examined or assessed, and a register maintained. Performance must be monitored and failures disciplined. A register has greater effect if supported by licensing arms of government.

Engineers Australia supports a co-regulatory model of registration, which involves statutory bodies and professional associations undertaking various roles. The co-regulatory model provides greater assurance of the competency of registered engineering practitioners and reduces the risk of physical and financial harm to consumers. This approach allows industry and assessment entities like Engineers Australia to control the qualifications and competency standard applied to a practitioner, and allows government to oversee the assessment and monitoring system and standards applied to practitioners through the approval process.

A guiding principle of the voluntary registration model introduced by Engineers Australia (the NER), is to increase the professionalism of the broadest possible cohort of practising engineers. Under a co-regulatory approach, Engineers Australia believes that legislation governing the delivery of engineering services in states and territories ought to:

- contain restrictions on who may deliver engineering services
- restrict the 'registered' title to those who are on an engineering register
- register engineers in the broadest possible areas of engineering practice aligned with the areas of practice and not by industry sector, with the onus on each registered engineering practitioner to only undertake work that he or she is competent to undertake
- base registration on a competency assessment by approved assessment entities
- include a mandatory continuing professional development regime for ongoing registration

4.1 Recommendations

- **Ongoing consultation with Engineers Australia to develop the registration legislation.**
- **Implementation of the ACT Engineer Registration Scheme in 2023.**

5.0 Concluding remarks

The recommendations outlined in this budget submission are readily achievable with minimum investment required on the part of government, while delivering a significant benefit to the engineering profession and the community. However, what is central to all of these recommendations is timely implementation to improve standards and quality, and address the worsening skills shortages.

Engineers are on the frontlines of responding to COVID, developing solutions for business, government and the community at large. The big ideas in response to climate change are engineering-based, alongside developing technologies that create new industries, jobs and businesses. The recommendations as per this budget submission are practical reforms and initiatives that will help engineer a better future.



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