

31 May 2024

Jobs and Skills Australia  
Department of Employment and Workplace Relations  
Canberra ACT 2601

### **Submission on Draft Core Skills Occupation List**

Chemistry Australia is the peak national body representing the chemistry industry. Chemistry Australia members include chemicals manufacturers, importers and distributors, logistics and supply chain partners, raw material suppliers, plastics fabricators and compounders, recyclers, and service providers to the sector and the chemistry and chemical engineering schools of a number of Australian universities.

The \$38B chemistry industry plays a vital role in the Australian economy, underpinning more than 212,000 jobs and supplying products, technologies, and innovations to 108 of Australia's 114 industry sectors. It is essential to healthcare, mining, agriculture, construction, infrastructure, transport, and manufacturing. In addition, the products of the chemistry industry support urban and regional communities and the daily lives of all Australians, including providing clean and safe drinking water and keeping food fresh from the farm to the plate.

Chemistry Australia welcomes the opportunity to make this submission on the Draft Core Skills Occupation List (Draft CSOL). However, it should be noted that the results outlined in this submission fill only part of the picture of the need for the chemical and plastics industry due to the timeframe for consultation and the demands on industry in the current economic circumstances. It is also made acknowledging that further information is yet to be supplied on the new Specialist Skills Stream for roles where the median salary is above the \$135,000 threshold.

#### *Chemical and plastics industry roles*

The chemical and plastics industry requires a variety of skilled employees, predominantly engineers, technicians and other STEM qualified individuals at VET and University qualification levels. Experience within the chemistry industry is highly regarded for these roles as they are often specialised positions where experience can ensure safe and efficient operations.

The business of chemistry is delivering solutions to many of the challenges confronting society while also providing vital inputs to essential services such as water treatment, food production and medical supplies in Australia. As was experienced during the recent pandemic, maintaining local manufacturing capacity is a major strategic strength in any economy.

Chemistry is a common and critical supporting part of the priority industries identified in the Australian Government's "A Future Made in Australia" policy. There are several occupations listed for consultation on the Draft CSOL that are in both short supply in Australia, based on both qualifications and required experience, that will be critical to achieving the governments aims. In part, these occupations include:

- Experienced Chemists (234211); Chemical Engineers (233111); Materials Engineers (233112); Production or Plant Engineers (233513); and Technicians and Trades Workers (Mechanical Fitters) (399999) will all be needed to support the refining and processing of critical minerals the development of battery and solar cell technology and the transition to a circular economy.
- To produce green hydrogen, green metals, low carbon fuels and renewable energy infrastructure in addition to some of the roles above there are also shortages for Mechanical Engineers (233512); Electronics Engineers (233411); Electrical Engineering Technicians (312312); Mechanical Engineering Draftsperson (312511); Mechanical Engineering Technicians (312512); Electronic Instrument Trades Workers (342314); and Gas or Petroleum Operators (399212).

The chemical and plastics industry also supports established major Australian industries such as agriculture, food manufacturing, mining and the construction and refurbishment of dwellings and commercial buildings. In addition to the roles listed above, the following occupations either currently have sponsored employees or are in short supply and are on the Consultation list:

- Technical Sales Representatives (225499)
- Corporate General Manager (111211)
- Production Manager (manufacturing) (133512)
- Building and Engineering Technicians (312999)

In addition, members have also pointed out roles in parts of their supply chain, either for contractors or labour hire firms, that are also necessary. These include:

- Airconditioning and Mechanical Services Plumber (334112)
- Electrician (Special Class) (341112)

A comprehensive list of roles on the CSOL “Target for consultation” highlighted by Chemistry Australia members as necessary to remain available through skilled migration is attached at the back of this submission.

As has been pointed out in various reports, Australia faces a general STEM skills shortage. As the economy changes more roles will require STEM skills. However, Australia is not domestically training suitable numbers of engineers and other skills required to meet current demand, let alone growth. This is heavily impacting the chemical and plastics industry leading many companies to use Skilled Migration pathways to fill empty roles.

For example, the recent Australian Universities Accord pointed out that “*critical professions including engineering, dentistry and veterinary science are experiencing significant skills shortages nationally*” (Australian Universities Accord Final Report, 2024, p. 60). The same report also stated that the Jobs-ready Graduate package “*reduced the amount of funding available to universities to deliver subjects that are critical to future jobs and innovation like science, engineering and mathematics.*” (Australian Universities Accord Final Report, 2024, p. 281).

### *Conclusion*

It is of great concern to the chemistry industry that so many roles that were previously on the Skilled Priority List are now on the consultation list. These skills are critical to meeting the Australian Government's policy aims and the general sustainability transition of Australian industry.

Without access to these occupations through skilled migration, not only are the goals of the Australian Government being put at risk, but also the sovereign capability to continue to deliver high-quality manufacturing products locally. There is also the potential that as these roles become harder to fill, investment will be impacted.

As well as being a key supplier to existing major Australian industries, the chemistry industry will also be a critical enabler for the future industries being prioritised by the Australian Government. Without access to skilled migration to fill the shortage of qualified people in technical and engineering roles, as well as to allow the importation of subject matter experts in these new technologies, Australia will not be able to succeed in the challenges facing our society.

As the development of the CSOL continues, along with the other skilled migration changes, we would like to stay informed and consulted. Should you have any questions about this submission, please contact me at [REDACTED]

Yours sincerely,

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**Chemistry Australia**



## Selected Case Studies

### Case Study – Specifically skilled role to develop more sustainable manufacturing:

A Chemistry Australia member provided this example of an attempt to employ a skilled migrant as a Chemist.

Chemical companies are wanting to produce more sustainable materials to meet growing domestic demand in commercial and residential construction. In this case, the company is also attempting to meet increased local demand resulting from changes to government policy to improve the energy efficiency of new and existing buildings.

The skills to manufacture these new chemicals at an industrial level do not exist in Australia and therefore they have sought to employ someone with the knowledge and experience internationally. As an addition, this new employee will be able to pass on their knowledge and skills to local Chemists and help to accelerate the transition to more sustainable materials.

As a role that will be a central part of the company's strategy it would be in the interest of the company to ensure their hire, when they arrive, has a positive experience greatly reducing the chance of the negative migrant outcomes.

Unfortunately, as we prepare this submission, the application has been delayed significantly which is impacting the ability to transition to this new more sustainable process.

### Case Study – Positive migrant outcomes:

A Chemistry Australia member sponsored several Mechanical engineering technicians on TSS-400 visas.

The gains that have been achieved from these skilled migrants has meant that the company has been able to convert these to longer-term 482 visas, creating greater certainty for both the company and for the skilled migrants.

### Case Study – Qualifications for broader role

Technical and engineering knowledge are required in other roles within Chemistry Australia members workforces, especially Chemical Engineering qualifications. One example is in regionally based sales roles where not only are salespeople required to sell the product, but they also provide on site servicing and assistance in the application of the product in the customers machines.

In remote location especially, sourcing people locally to fill these roles is not possible as local applicants are unwilling to relocate, requiring organisations to rely on skilled migrants. These migrants generally remain loyal to the business that sponsored them and embrace the opportunity to expand their skills and professional development.

## Chemistry Australia – CSOL targeted for consultation roles

Please note, this list is not comprehensive and only contains those roles highlighted by members for this consultation that were on the CSOL targeted for consultation document.

Critical Shortage Occupation	ANZSCO code
Corporate General Manager	111211
Production Manager (Manufacturing)	133512
Technical Sales Representatives (NEC)	225499
Chemical Engineer	233111
Materials Engineer	233112
Electronics Engineer	233411
Mechanical Engineer	233512
Production Or Plant Engineer	233513
Chemist	234211
Mechanical Engineering Draftsperson	312511
Mechanical Engineering Technician	312512
Building and Engineering Technicians	312999
Airconditioning and Mechanical Services Plumber	334112
Electrician (Special Class)	341112
Electronic Instrument Trades Worker (General)	342314
Gas Or Petroleum Operator	399212
Technicians and Trades Workers	399999