



13 September 2024

## **Submission: National Energy Workforce Strategy**

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure the safe and reliable delivery of 28 per cent of the end-use energy consumed in Australia and are at the forefront of Australia's renewable gas industry, helping achieve net-zero as quickly and affordably as possible.

APGA welcomes the opportunity to contribute to the Department of Climate Change, Energy Environment, and Water's initial consultation process towards developing a National Energy Workforce Strategy. As Australia transitions to a net zero economy, a large shift will be required in the workforce that supports it, and planning for this shift needs to begin in earnest. A broad strategy for the skills needs of the clean energy industry will be needed, which goes beyond the electrification pathway and acknowledges the critical role of renewable gases for transitioning the Australian economy.<sup>1</sup>

APGA supports a net zero emission future for Australia by 2050<sup>2</sup>. Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. As set out in Gas Vision 2050<sup>3</sup>, APGA sees renewable gases such as hydrogen and biomethane playing a critical role in decarbonising gas use for both wholesale and retail customers. APGA is the largest industry contributor to the Future Fuels CRC<sup>4</sup>, which has over 80 research projects dedicated to leveraging the value of Australia's gas infrastructure to deliver decarbonised energy to homes, businesses, and industry throughout Australia.

Australia's skilled workforce is heavily reliant on skilled migration. While Australian states are undertaking their own initiatives to develop clean energy workforce strategies, a national approach is required particularly when considering drivers and incentives around skilled migration, which will be critical to answering some of Australia's energy workforce challenges.

Broader conversations about the national energy transition are also necessary as decisions around the pathways to net zero will impact workforce requirements. APGA has advocated a

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<sup>1</sup> ACIL Allen, 2024, *Renewable Gas Target: Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

<sup>2</sup> APGA, *Climate Statement*, available at: <https://www.apga.org.au/apga-climate-statement>

<sup>3</sup> APGA, 2020, *Gas Vision 2050*, [https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation\\_04.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation_04.pdf)

<sup>4</sup> Future Fuels CRC: <https://www.futurefuelscrc.com/>

vision for a renewable gas pathway to support Australia's net zero transition.<sup>5</sup> Renewable gas will play a role in the energy transition, both for commercial and industrial consumers who cannot electrify, as well as any consumer for whom it's either cost effective or simply their choice to decarbonise using renewable gas.<sup>6</sup>

Alongside electrification, the National Energy Jobs Strategy must consider a renewable gas pathway and associated skills needs, development, and contribution to the clean energy workforce.

### **Critical clean energy workforce shortages ahead**

Australia's ability to deliver on net zero targets requires access to the necessary workforce. These skills needs also encompass many other areas of the economy which are experiencing strong demand – residential and civil construction, for example, will be a strong competitor for skills in clean energy.

Jobs and Skills Australia's examination of the future clean energy workforce considers the current and future clean energy workforce constraints. A focus on electrification presents a particular challenge. To meet Australia's current renewable generation targets, for example, between 26,000 and 42,000 additional electricians are required by 2030 – outpacing current supply of a critical occupation that is already in shortage.<sup>7</sup>

Challenges in addressing engineering professional and trade shortages were considered by the Federal Government in 2014<sup>8</sup> and separately for the resources sector in 2013.<sup>9</sup> The issues encompassed have largely not changed in the intervening decade. What has changed is that increased competition for these skills globally may mean that migration is will not be able to meet shortages where they may have previously or for other occupations.

Electrical and engineering occupations, for example, have features on the Skilled Occupation List since it replaced the Migration Occupations in Demand List in 2010, signalling that electrical and engineering tradespeople and professionals are consistently in regional and national shortage. State and Federal governments have made strong efforts to address these shortages domestically through investment in tertiary training, however this pipeline is not enough to meet current shortages, let alone future shortages.

### **Skill opportunities for the gas workforce**

Australia's gas workforce has considerable skills that can support the net zero transition – especially in dual decarbonisation pathways of renewable electricity and renewable gas. Without such a dual pathway, workforce planning will need to consider transition for those workers as well as increased pressure on electrical and related workforces.

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<sup>5</sup> ACIL Allen, 2024, *Renewable Gas Target: Delivering lower cost decarbonisation for gas customers and the Australian economy*, <https://apga.org.au/renewable-gas-target>

<sup>6</sup> APGA, 2023, *Submission: Victorian Renewable Gas Consultation*, <https://apga.org.au/submissions/victorian-renewable-gas-consultation>

<sup>7</sup> Jobs and Skills Australia, 2023, *Clean Energy Capacity Study*, <https://www.jobsandskills.gov.au/studies/cleanenergycapacity-study>

<sup>8</sup> Australian Workforce and Productivity Agency, 2014, *Engineering workforce study*.

<sup>9</sup> Australian Workforce and Productivity Agency, 2013, *Resources sector skills needs*.

Jobs and Skills Australia’s examination of the future clean energy workforce notes the capacity of the gas workforce and the need for ongoing skills needs in renewable hydrogen production and transport:

*Australia will be able to leverage its large and skilled natural gas workforce to support these types of infrastructure works. The Minerals Council of Australia noted that a successful clean hydrogen industry will require similar skills to those already required by mining, oil and gas, meaning significant re-skilling won’t be needed.*<sup>10</sup>

Importantly, as biomethane is chemically identical to natural gas, reskilling or upskilling may not be necessary for all of those workers. There will also be additional skill opportunities in biomethane production and related work.

An increased focus on a renewable gas pathway – alongside electrification, particularly for the residential and commercial sectors – would provide an alternative skills stream. More importantly, a viable renewable gas industry in Australia would reduce the anticipated pressure on skills related to electrification, while supporting Australia to meet decarbonisation targets.

To discuss any of the above feedback further, please contact me on +61 422 057 856 or [jmccollum@apga.org.au](mailto:jmccollum@apga.org.au).

Yours sincerely,



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<sup>10</sup> Jobs and Skills Australia, 2023, *Clean Energy Capacity Study*, <https://www.jobsandskills.gov.au/studies/cleanenergycapacity-study>