Powering Skills Organisation Ltd

JSC Jobs and Skills Council Agribusiness An Australian Government Initiative

Minding Their Own Business

Exploring Self-Employment in the Energy Labour Market

Research Brief
November 2024

Research Summary

- About 21% of workers in six critical energy occupations are self-employed.
- This is the highest rate since 2017 and the second highest in a decade.
- It exceeds the overall Australian workforce rate of 16%.
- Airconditioning and Refrigeration Mechanics (39%) and Electricians (20%) have notably high self-employment rates.
- Powering Skills Organisation (PSO) offers three reasons why self-employment is high in these trades – it's what these workers want, it's what they see, and it serves the market well.

Describing the research and data

To conduct this research, PSO analysed self-employment data across six critical energy occupations in Australia, including all sectors and without distinguishing between renewables and non-renewables. These occupations are:

- Electricians
- Airconditioning and Refrigeration Mechanics
- Electrical Linesworkers – Transmission and Distribution
- Electrical Engineers
- Electrical Engineering Draftspersons and Technicians
- Electronic Trades Workers

Self-employed individuals are defined as either employers or sole traders. The primary data source is August 2023 ABS Characteristics of Employment, supplemented by ABS Census data and NCVER data where specified.

Unpacking the data

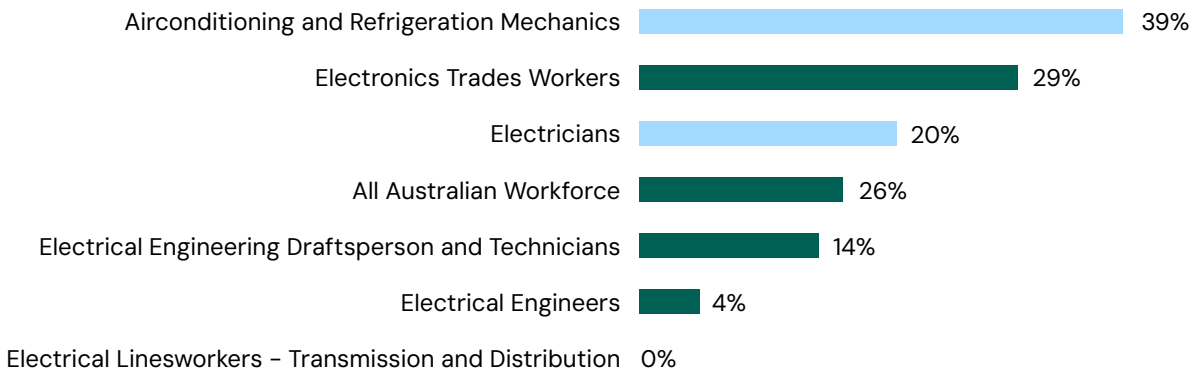
Of 290,000 people in these occupations, about 62,000 are self-employed.

- This gives a 21% self-employment rate, with one in five running their own business (and one in ten as sole traders).
- This is the highest self-employment rate since 2017 and the second highest in a decade.
- This is likely driven by the remnants of pandemic-era stimulus and the resulting high demand in building services and construction.[1]
- This 21% rate exceeds the overall Australian workforce rate of 16%.

But there is more to the story than just these figures.

- Self-employment rates vary widely by occupation, with more common roles being more entrepreneurial.
- Electricians, who make up half of the 290,000 workers across these six critical energy occupations, have a 20% self-employment rate, meaning nearly one in five are their own boss.
- Airconditioning and Refrigeration Mechanics, the second largest group, are the most entrepreneurial, with 39% self-employed (see Figure 1).
- Electrical Engineers, Electrical Linesworkers – Transmission and Distribution and associated workers are also more likely to be employed in centralised companies (often publicly owned). This makes sense given the natural monopoly of large-scale transmission and distribution assets.
- These variations highlight that these occupations are diverse, with distinct characteristics and patterns of business formation.

Figure 1: Doing it for themselves
Self-employment by Selected Occupation, Australia.



Source: ABS Characteristics of Employment (2023). https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/characteristics-employment-australia/latest-release

[1] Mizen, R. (2022). 'Construction businesses account for almost one in five new firms'. The Australian Financial Review. https://www.afr.com/policy/economy/construction-businesses-account-for-almost-one-in-five-new-firms-20220325-p5a81r

Focus on Electricians and Airconditioning and Refrigeration Mechanics

Electricians and Airconditioning and Refrigeration Mechanics make up 77% of the 290,000 workers across these six occupations.

PSO examined self-employed workers in these occupations to identify differences from standard employees.

Age is a key factor across these two occupations (see Figure 2):

- Around 17% of workers aged 25-34 are self-employed.
- Nearly 46% of those aged 55-64 are self-employed.
- This trend may reflect the accumulation of experience and confidence to start a business.

Additional patterns include:

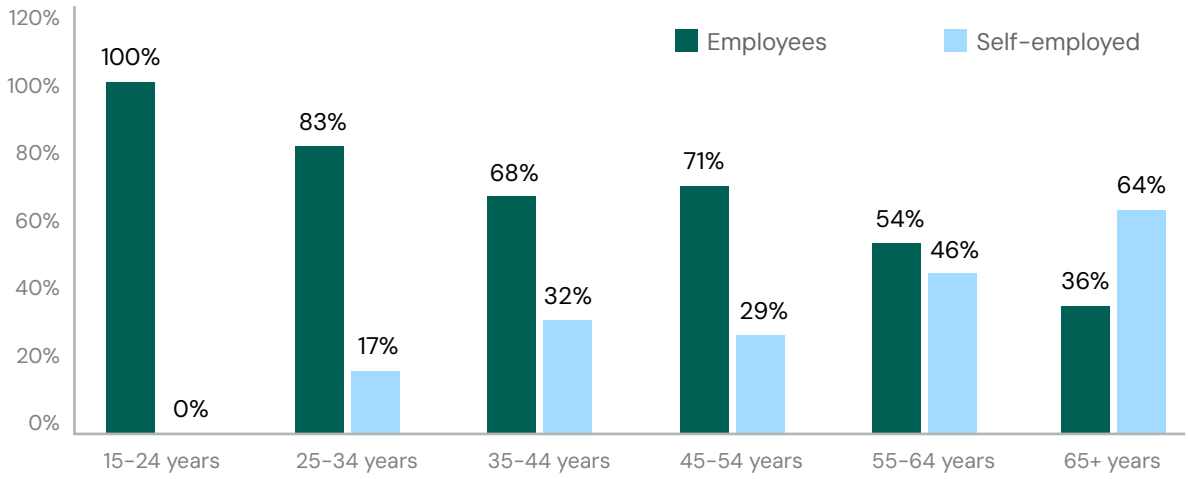
- Men are more likely to be self-employed than women, and non-Indigenous people more so than First Nations People.[2]
- Migrants are more likely to be self-employed than Australian-born individuals.[2] This is a notable finding in the context of PSO's ADAPT workforce planning model, in particular Focus Area Two – Diversity.[3]

Factors not influencing self-employment:

- Average income was broadly equivalent for both self-employed workers and standard employees – even when controlling for age. The exception being young business owners (aged under 30) earnt more than their same aged peers who worked as employees.[2]
- Workers from regional areas were just as likely as those in capital cities to be self-employed.[2]
- No state or territory had a particularly high rate of self-employment (Victoria lead with 24%, Northern Territory was the lowest at 16%).[2]

Overall, these findings suggest that the high rate of self-employment in these occupations are a broad-based feature of the industry and may have evolved over time to optimally serve the market well with the skills it needs.

Figure 2: The mature entrepreneur
Self-employment for Electricians and Airconditioning and Refrigeration Mechanics.



Source: ABS Characteristics of Employment (2023). https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/characteristics-employment-australia/latest-release

[2] ABS Census of Population and Housing (2021). https://tablebuilder.abs.gov.au/webapi/jsf/login.xhtml
[3] For more information on the ADAPT model, including workforce diversity, see PSO's 2024 Workforce Plan.

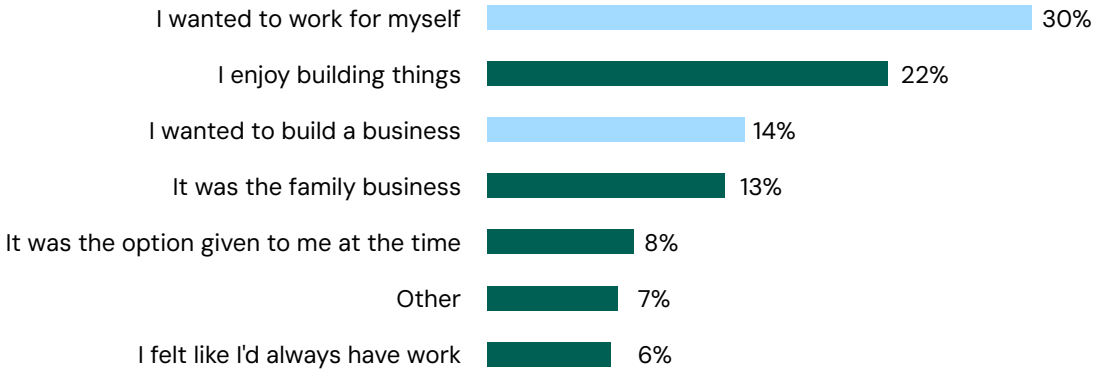
Explaining high rates of self-employment

PSO identify three reasons why self-employment is higher for Electricians and Airconditioning and Refrigeration Mechanics compared to the average Australian worker.

1. It's what they want.

- Recent research shows the top reason tradespeople choose their careers is to work for themselves, with building a successful business ranking third (see Figure 3).[4]
- Even those not yet self-employed are ambitious, with nearly one in three planning to start a business in the next five years, and almost half of those aged 25-34.[4]
- These figures suggest self-employment is a goal for many in these trades, being one of the primary motivators and perceived benefit of commencing a trades career.

Figure 3: Career intentions matter
Why did you get into the trades?



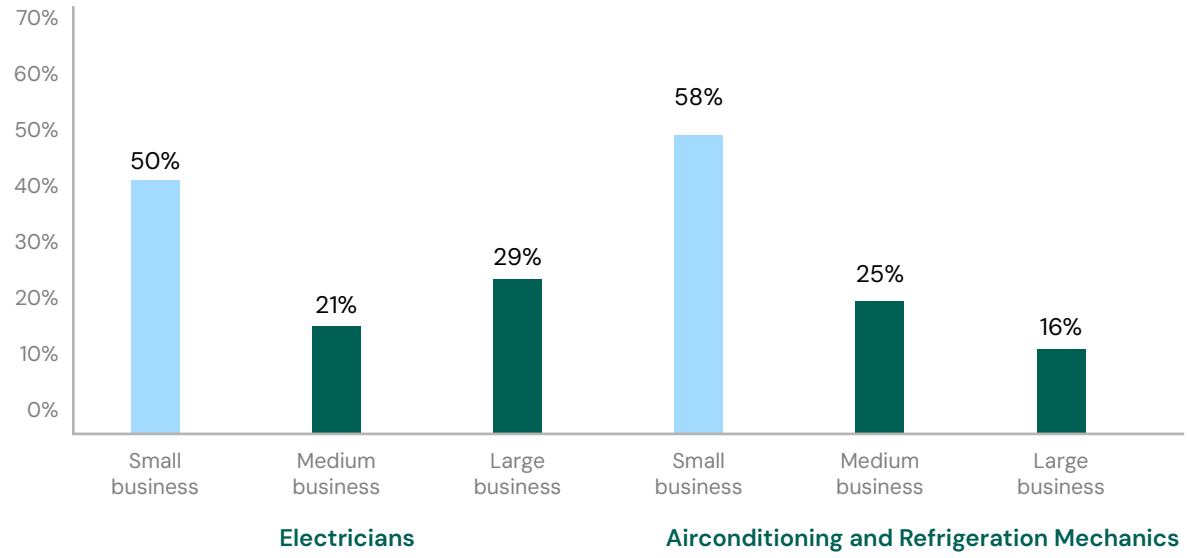
Source: Trout and Next (2024). Future Tradie Report. https://www.futuretradie.report/download-report

2. It's what they see

- Small businesses across the country are the engine room of trade apprenticeships. Small businesses train half of Electricians and more than half of Airconditioning and Refrigeration Mechanics (see Figure 4).
- It's possible this gives apprentices exposure to business owners themselves – especially those that are also skilled tradespeople. This may give them models of career development in their formative stages of working in the industry, reinforcing the underlying motivation to work for oneself or build a business that employs others.

[4] Trout and Next (2024 p18). Future Tradie Report. https://www.futuretradie.report/download-report

Figure 4: Smaller business, larger trainer
% of Electrician and Airconditioning and Refrigeration Mechanics Apprentices by Employer Size.



Source: NCVER Apprentices and Trainees dataset (2023).
https://vocstats.ncver.edu.au/webapi/jsf/dataCatalogueExplorer.xhtml
Small business <19 employees; Medium business >19 to <100 employees;
Large business 100+ employees. Data is the average from 2019 to 2023.

3. It serves the market well

- Tradespeople, including Electricians and Airconditioning and Refrigeration Mechanics, often commute to various job sites due to the temporary and geographically dispersed nature of projects.[5]
- Work can range from smaller residential and commercial jobs to large-scale infrastructure projects and is often broken into smaller contracts and sub-contracts with discrete tasks and requirements.[6]
- High self-employment rates may have evolved to service this type of market, with mobile and decentralised small businesses able to compete for a range of job scopes utilising their specialist skill sets.[6]
- This environment has enabled many current businesses to thrive by starting and staying small, making self-employment a viable option for skilled individuals in the electrical trades.

[5] Master Builders Australia (2014 p2). Submission to the Productivity Commission Inquiry into Geographic Labour Mobility. https://www.pc.gov.au/__data/assets/pdf_file/0003/133797/subdr045-labour-mobility.pdf
[6] Productivity Commission (2001 p3). Self-employed Contractors in Australia: Incidence and Characteristics. https://www.pc.gov.au/research/supporting/self-employed/secia.pdf

The challenges of self-employment

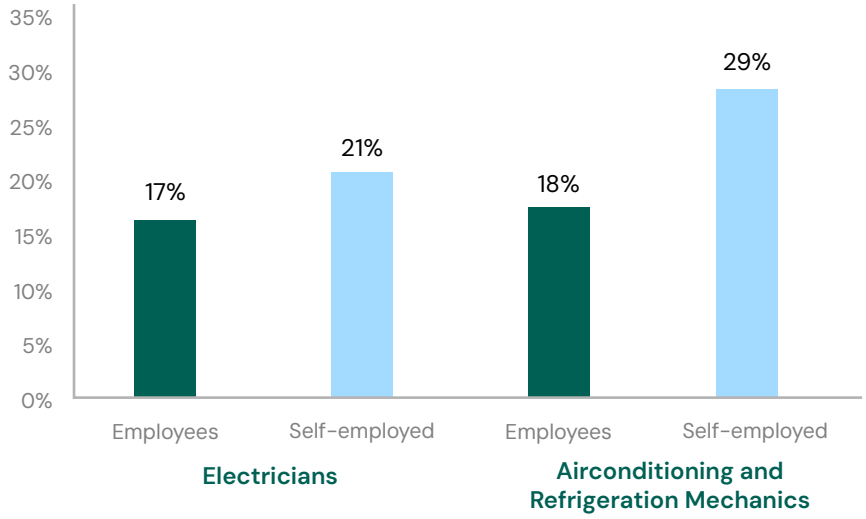
Being self-employed comes with benefits and challenges. Everyone business owner knows this.

PSO has identified three key challenges of self-employment.

1. Longer hours

- PSO's research suggests that a larger share of self-employed Electricians and Airconditioning and Refrigeration Mechanics prefer to work fewer hours compared to standard employees (see Figure 5).
- A large driver of this additional workload could be the burden of business administration – with an estimated 19 hours per week required. [7]

Figure 5: There are downsides to self-employment
Workers who preferred fewer hours (%)



Source: ABS Characteristics of Employment (2023). https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/characteristics-employment-australia/latest-release

2. Less paid leave

- Another drawback of self-employment is forgoing paid leave entitlements that many standard employees receive – like sick leave, paid annual leave and parental leave.
- Research in this area indicates that one in three small business owners take less than two weeks leave annually, which is much lower than standard employees.[8]

3. New skill acquisition

- Acquiring a trade is distinct from learning to build a successful business.
- While apprenticeships offer skills-based education, there is no equivalent pathway for developing business acumen.[9]
- Essential business skills include tax knowledge, human resource regulations, marketing, and financial management.
- Additionally, navigating business cycles, such as high interest rates and slowing economic growth, is crucial.

[7] Tradify (2022 p5). Pulse Report. https://www.tradifyhq.com/hubfs/Pulse%203/Tradify_Pulse_AUS_2022.pdf
[8] OnDeck (2022). https://www.ondeck.com.au/press-releases/time-for-a-break-1-in-3-small-business-owners-take-less-than-2-weeks-leave-annually/
[9] Tradify (2022 p16). Pulse Report. https://www.tradifyhq.com/hubfs/Pulse%203/Tradify_Pulse_AUS_2022.pdf

Policies to support self-employment

The Australian Government offers a range of programs and supports for self-employed people across the country, which includes the six occupations explored in this paper.

For information and resources available if you are self-employed or are thinking about starting your own business see https://business.gov.au/.

Importantly, the main program run by the government to assist in this area is the Self-Employment Assistance program.

- This free program provides access to a range of services including workshops to help understand what's involved in starting a business, small business training (including formal qualifications in entrepreneurship and business management), and support from a business mentor for up to 12 months.
- The Self-Employment Assistance program is delivered across 51 regions across Australia, including regional and remote areas.

For further information, please contact:
info@poweringskills.com.au.

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