Electrical Trades Union

New Energy Workforce Strategy

AUGUST 2024

Submission to the Consultation on the New Energy Workforce Strategy Discussion Paper

31 August 2024

About the ETU

The Electrical Trades Union of Australia ('the ETU')[1] is the principal union for electrical and electrotechnology tradespeople and apprentices in Australia, representing more than sixty-five thousand skilled workers around the country.

The electrical workers we represent will form the backbone of Australia's clean energy workforce across all sectors and stages of the transition. The ETU acknowledges the significant task ahead of building up a skilled workforce capable of delivering Australia's clean energy revolution, noting that there already exists a shortage of electrical tradespeople in every state and territory across the country.

For over 120 years ETU members have trained the next generation of electrical tradespeople, and the ETU is proud to be involved in the operation of registered training organisations around the country, seeing these institutions as a core part of training the next generation of electrical workers that will be critical in delivering our renewable energy future. The ETU has been a central advocate in the evolution of electrical apprenticeships, and their unique blending of on- and off-the-job education. We draw on this experience in our response to this consultation.

Acknowledgement

In the spirit of reconciliation, the ETU acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all First Nations peoples today.

Introduction

The ETU supports the government's ambition to decarbonise the economy and become a global leader in renewable energy. Achieving these objectives is nothing short of an Industrial Revolution as our society and economy shifts from coal, oil, and gas to renewable electricity and storage. To deliver this transition, Jobs and Skills Australia has estimated that – on current trends – there will be a shortfall of 32,000 electricians by 2030, increasing to 117,000 by 2050: directly jeopardising Australia's net zero transformation. We note, furthermore, that these estimates do not include the recent "Future Made in Australia" policy announcements, which JSA estimates will lead to a shortfall of 42,500 electricians by 2030.[2]

The electrification of everything needs electricians. A failure to properly address these workforce shortages will act as a handbrake on the government's ambition to decarbonise the economy and become a "Renewable Energy Superpower".

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[1] Being a division of the CEPU, a trade union registered under the *Fair Work (Registered Organisations) Act 2009* (Cth).
[2] See JSA (2003), *The Clean Energy Generation,* p. 165. The 32,000 estimate is based on the 'central' scenario, with the Future Made in Australia requirements broadly corresponding to the 'high' scenario.

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The ETU acknowledges the significant task ahead in attracting, training, and retaining a skilled workforce capable of delivering Australia's clean energy revolution. This challenge is made more complex when considering the challenges of:

- recruiting and training new apprentices – including previously underrepresented cohorts;
- ensuring apprentices have access to relevant training with contemporary electrical equipment;
- lifting completion rates;
- improving labour standards, especially in grid-scale renewables; and
- ensuring that existing workers with high energy literacy and transferable skills in declining fossil fuel industries are provided the opportunity for a just transition into secure jobs in the clean energy sector.

As we outline in our submission, the solution is not just attracting more apprentices into the electrical trades. As we and others in industry have noted, there is not enough capacity in our training centres, not enough trainers and an insufficient number of employers willing to train the future electrical workforce at the scale that's needed for the transition.

The ETU has developed an 8-point plan to address critical workforce shortages in the electrical workforce (see appendix 1). The plan includes:

1. Implementing industry conditions and minimum training requirements on all government funded projects.
2. Expansion of industry RTOs and TAFE campuses
3. Industry-led apprentice recruitment and mentoring to improve completion rates
4. Investment in and mandating of group trainer arrangements
5. Wage supplements for trainers
6. Industry Migration Agreements
7. Campaigns to improve the perception of clean energy jobs
8. Whole of government coordination

The ETU has also made submissions to each of the sectoral decarbonisation plans, and we welcome the opportunity to contribute to the development of the New Energy Workforce Strategy. A comprehensive strategy is crucial to implementing these strategies and ensuring that these strategies have a coordinated approach to new energy workforce development. When related strategies operate in siloes, opportunities to share learning are missed and areas of conflict may arise. As renowned economist Mariana Mazzucato states:

> The old model of siloed delivery and accountability, even if effective in pockets at the turn of the century, is not sufficient for the scale of contemporary challenges; for achieving inclusive economic growth, boosting productivity, reducing health inequalities, adapting to technological advances and addressing the climate emergency.[3]

[3] Mariana Mazzucato. (2024). Mission Critical 01 | Statecraft for the 21st century

In this submission, we make several recommendations aimed at scaling up investment in and reforming the VET sector to lift completion and commencement rates and deliver the workforce that will electrify everything. Jobs and Skills Australia (JSA) will be crucial to these reforms, performing the critical role of coordinating across government to ensure that sectors and industries are not competing against each other for a finite workforce and are instead working together to train and employ the workforce that will deliver net zero and a future made in Australia.

Recommendations

Recommendation: JSA must be provided with ongoing funding to expand and continue its critical role in identifying workforce needs and shortages, identifying current and needed training capacity, and coordinating across whole of government to deliver the necessary reforms to the higher education sector.

Recommendation: federal and state governments should invest directly in industry-led RTOs, so that they receive an equal share of funding with TAFE. This increase would recognise and reward industry-led RTOs for their significantly higher successful completion rates. This will drive up electrical apprentice completion rates even further across the sector, ensuring that as we grow, the VET workforce is used in the most efficient way possible.

Recommendation: future reforms of the National Skills Agreement should specify equality of funding between industry-led, not-for-profit RTOs and TAFE.

Recommendation: the federal government should extend the Australian Skills Guarantee to clean energy projects, and furthermore, apply minimum apprentice requirements to Commonwealth dollars administered outside of the Procurement Connected Policy. Apprentice targets should include specific targets for first and second year apprentices.

Recommendation: the federal government should fund a pilot industry-led apprentice mentoring program which engages field officers with industry experience to oversee and mentor apprentices throughout their training. The pilot must include a funding stream for training of tradespeople in on-the-job apprentice training and mentoring skills.

Recommendation: the federal government should apply appropriately designed procurement targets for women apprentices as a condition of Commonwealth funding. Employer performance must be linked to the provision of suitable PPE, bathrooms, and changerooms being available and suitable for women at all worksites.

Recommendation: federal and state governments should provide support for industry-led RTOs and TAFEs to provide dedicated pre-apprenticeship programs for women, including mentorship from women leaders in the industry.

Recommendation: the federal government should provide financial support to the industry-led apprentice mentoring programs, recognising that the model is designed to provide direct support to women apprentices through regular contact with women apprentices, mentoring, and monitoring of worksites to ensure compliance with workplace health and safety law regarding harassment and PPE.

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Recommendation: state and federal governments should work with the First Nations Clean Energy Network to implement the recommendations in their *Powering First Nations Jobs in Clean Energy* report.

Recommendation: Jobs and Skills Australia should map existing renewable energy units in current training packages *and* the number of renewable energy units that are currently being taught and where they are being taught. This would allow planners to assess whether current training programs are providing suitable offerings in the locations most needed for the energy transition and provide targeted support to VET providers to offer these low-volume capital-intensive units in the areas that they are most needed.

Recommendation: the federal government, in consultation with industry, should develop and implement trial projects in which a GTO is appointed to a REZ. All relevant renewables projects within that REZ would be required to either engage apprentices directly or engage apprentices through that GTO, to provide certainty for a GTO to expand into that region and improve the facilitation of workers into apprenticeships.

Recommendation: federal and state government should use procurement practices to affect change and improve the experiences of women in the clean energy trades. This must go beyond a simple metric of the number or percentage of women on site and include requirements that demonstrate on how companies will provide a safe and positive work environment, thereby complying with requirements under the Respect @ Work Act.

Recommendation: the federal government should seek to harmonise state based regulatory frameworks and licencing standards to the highest common standard, to facilitate mobility between states to work on clean energy projects and ensure the highest standards of licensing apply.

Recommendation: the federal government should reinstate a program for OTSA pathways to alleviate some of the significant costs associated with OTSA. If carefully co-designed with industry, not only could the existing systems be streamlined for electricians and air-conditioning and refrigeration mechanics, but the system could be expanded to include clear pathways for other energy sector trade qualifications.

Recommendation: the federal government should invest in streamlining skills assessment for potential migrants from countries with comparable qualifications who want to work in Australia's clean energy industry in skilled electrical trades occupations.

Recommendation: the Federal Government should work with unions and industry to implement an Electrical Industry Labour Agreement (ELIA) to protect migrant workers from exploitation and provide strategies to develop the domestic workforce capacity.

Recommendation: the federal government should abolish the requirement of 'specified work' for extending the length of a Work and Holiday visa (WHV).

Recommendation: the federal government should establish a Clean Energy Jobs Advocate as a dedicated statutory role with responsibility to support and assist government through the energy transition and provide planning and coordination work programs across departments and levels of

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government. The Advocate would work across all levels of government and with all stakeholders, including unions and employers, to coordinate and facilitate access and uptake by industry and training bodies to ensure jobs created are in roles that are needed, and support further workplace learning and development.

Attract, Train and Retain

1. What do you consider to be the main barriers to growing the clean energy workforce? What actions can be taken to overcome these barriers and attract more workers to the sector?

On current completion rates, Australia needs to recruit an additional 55,000 electrical apprentices by 2027 just to keep the lights on as Australia undergoes the renewable energy transition.[4]

Currently, there are simply not enough trade schools to train all of the electrotechnology apprentices Australia needs, and there are not enough employers willing to employ – and properly train – apprentices. Whilst lack of interest in applying for trade roles is often cited as a key reason for the current workforce shortages in the electrical trades and commencement levels below required levels, in truth the the current limiters to engaging more apprentices lie with the training system capacity, industry coordination, and employer willingness to engage.

As the National Electrical Contractors Association (NECA) notes:

> Students seeking to commence an electrotechnology apprenticeship are already unable to secure places in most parts of Australia, with RTOs, including TAFEs, at capacity in some cases up to 18 months in advance. In one jurisdiction, even the waiting lists have been suspended.[5]

Where good quality apprenticeships exist, they are significantly oversubscribed. For example, the ETU is working with Energy Queensland Ltd (EQL) and Powerlink to develop a workforce and skills resourcing plan as part of their Queensland Government's Energy and Jobs Plan. The plan outlines the parties' commitment to expand the annual apprentice intake at least 10% year on year, facilitated in part by pre-apprenticeship programs. With a focus on working together to develop strategies for increased recruitment of women and First Nations apprentices, EQL has achieved a record 50% women and 8% First Nations apprentices in the 2024 intake.

According to EQL:

- In 2022, there were 3110 Applicants for 145 positions
- In 2023, there were 4750 Applicants for 176 positions

[4] Based on NCVER reported apprentice completion rates of 58% applied to JSA's "baseline" forecast of a shortage of 32,000 electricians by 2030 – noting that the electrician apprenticeship is 4-years, meaning that apprenticeships must have commenced by 2027 at the latest.

[5] National Electrical and Communications Association, Submission No 20 to Jobs and Skills Australia, *Industry Capacity Study Discussion Paper* (May 2023) 7 <https://www.jobsandskills.gov.au/sites/default/files/2023-09/21.%20National%20Electrical%20and%20Communications%20Association.pdf>.

- In 2024, there were 1800 applicants for 185 positions, more than two weeks before the closure date for applications.

Significantly, the majority of these applicants met minimum eligibility requirements.

Strategies to address the shortages of training spaces include:

- greater investment to expand industry RTOs and TAFE campuses
- implementing minimum training requirements on all government funded or financed clean energy projects.
- industry-led apprentice recruitment and mentoring to improve completion rates.

Industry-led RTOs Deliver more Qualified Electrical Workers for Every Dollar Spent

Meeting the projected shortfall of 42,500 electricians cannot be achieved through increasing apprentice completions alone. With current completion rates sitting at approximately 58% across the broader sector, its vital to increase completion rates.

The ETU is currently involved in the operation of nine not-for-profit RTOs around Australia, some independently and some through partnerships with our industry employer associations. These industry-led RTOs have significantly higher apprentice completion rates than TAFE or for-profit RTOs, averaging over 92%.

This difference is even more stark considering that industry-led RTOs often have significantly lower resourcing capacity than their TAFE peers, due to receiving a smaller share of funding – noting that this varies considerably by jurisdictions.

In other words, industry-led, not-for-profit RTOs are delivering more qualified electrical workers for every dollar spent and every trainer hour worked.

Recommendation: Federal and state governments should invest directly in industry-led RTOs, so that they receive an equal share of funding with TAFE. This increase would recognise and reward industry-led RTOs for their significantly higher successful completion rates. This will drive up electrical apprentice completion rates even further across the sector, ensuring that as we grow, the VET workforce is used in the most efficient way possible.

Recommendation: future reforms of the National Skills Agreement should specify equality of funding between industry-led, not-for-profit RTOs and TAFE.

Government Procurement and Apprentice Ratios

The ETU has consistently advocated for apprentice ratios to be mandated in all government procurement and projects funded through special investment vehicles, to ensure that tenderers in receipt of government funding are investing in growing the VET workforce. The ETU routinely negotiates apprentice ratio clauses into the industrial instruments that are negotiated with employers. It is worth noting, that under the ABCC's Building Code applied by the previous government these provisions in industrial instruments in the building sector were effectively

prohibited. Whilst the Building Code is now rescinded and the ABCC abolished, due to the cycle of enterprise bargaining the ETU is still in the process of renegotiating these clauses. The legacy of the ABCC is as a major contributor to the ongoing skills shortage.

The Australian Skills Guarantee (ASG) establishes minimum apprentice requirements for government-procured building and IT projects, but it does not currently cover the construction of clean energy generation, storage and transmission projects. If the ASG is not expanded to clean energy sectors, the ASG will effectively be forcing participants in the building construction industry to train electricians and plumbers for the clean energy industry as well as their own.

Consideration must also be given to targeting apprentice ratios at first and second year apprentices. In industry, the working assumption is that apprentices do not become productive until their third year. Irrespective of the truth of this assumption, the ETU has received many anecdotal reports of the big business stripping SMEs of their later year apprentices in order to meet State Government mandated training ratios.

Minimum apprentice requirements will also need to be applied to Commonwealth dollars administered outside of the Procurement Connected Policy – such as concessional finance administered by the Clean Energy Finance Corporation, National Reconstruction Fund, and Powering the Regions Fund. The ETU proposes that this occurs through the application of Clean Energy Workforce Standards, as discussed below.

In the absence of minimum apprentice requirements, the ETU has seen widespread failures by employers in renewable energy generation and on new transmission projects to employ apprentices. Several, selected case studies are included in Appendix 2.

Recommendation: The government should extend the Australian Skills Guarantee to clean energy projects, and furthermore, apply minimum apprentice requirements to Commonwealth dollars administered outside of the Procurement Connected Policy. Apprentice targets should include specific targets for first and second year apprentices.

Comprehensive Reform of the Apprentice Incentive System

The ETU has made a detailed submission to the *Strategic Review of the Apprenticeship Incentive System,* which provides a more detailed analysis of the range of issues impacting apprentice commencements and completions.[6]

[6] ETU (2024) *Submission to Strategic Review of the Apprentice Incentive System,* https://www.etunational.asn.au/wp-content/uploads/2024/05/ETU-Submission-Apprentice-Incentive-Review.pdf

Industry-led Apprentice Recruitment and Mentoring to Improve Completion Rates

Mentoring and supporting energy apprentices is critical to driving up completion rates and bringing people from diverse backgrounds into the industry. However, the current mentoring system is not fit for purpose and requires a complete overhaul.

First, the current incentive system fails to support the people who actually train and mentor apprentices for the majority of their apprenticeships. Approximately 13% of an apprentice's training is actually in the classroom environment, with 87% of training occurring in the workplace and delivered by the supervising tradesperson. The current incentive regime is blind to the important role those tradespeople perform and provides no reward this work or requires employers to ensure those tradespeople are provided relevant training to make sure that on-the-job training is as effective as possible. It is assumed that this role is performed by 'someone else', presumably the apprentice support network providers.

Unfortunately, rather than receiving tailored mentoring and support, apprentices end up speaking to call centres with inexperienced support providers. That is, if they can even identify who their AASN is.

A 2022 Essential Media survey found that half of electrical apprentices reported having received no support at any stage in their apprenticeship and only 11% of electrical apprentices reported having been provided with mentoring or advice on electives from their AASN provider.[7] Critically, two-thirds of electrical apprentices could not name their AASN. To put it bluntly, if an apprentice can't name their mentor, it's because – in reality – they don't have a mentor.

Currently, the federal government contracts Australian Apprenticeship Support Network (AASN) providers to, notionally, provide "personalised advice and support services from pre-commencement to completion".[8] However, they have largely failed to deliver a meaningful increase in apprenticeship completion rates. Whilst not a criticism of the intent of the providers, the DEWR funded program is structured to all but ensure that ACAPs have no ties to industry and no trade experience. Should an apprentice contacts an ACAP for support, noting that most apprentices cannot name their provider, the staff the apprentice speaks with will have neither lived experience nor legitimacy to assist.

While the government has taken steps to reform the apprentice support services, these reforms do little to address the inherent conflict of interest in the AASN relationship. Namely, that AASN's are reliant on employers for their business and are therefore reluctant to support apprentices who are having trouble with their employer. The ETU has many examples – as illustrated by the case study below – where this lack of support often leads to apprentices resigning from their apprenticeship.

The government needs to take urgent action to reform the apprentice mentoring system in order not only to increase successful apprenticeship outcomes, but to comply with international

[7] Essential Media (2022), Essential Research Apprentices Survey.
[8] CITB, "Where can I get support throughout my apprenticeship?", n.d.

obligations. ILO recommendation R208 – adopted by the federal government – provides at section 25 (o) that governments are to:

> … create an enabling environment for promoting quality apprenticeships, including by developing, supporting and encouraging the inclusion of mentorships in apprenticeship programmes.

Industry mentoring represents the best – and perhaps only – option to deliver the workforce our country needs to build its energy future.

The ETU has developed a proposal for an industry-led pilot to provide electrical apprentices with support from trained workers in their own industry and provide employers with greater confidence to invest in apprentices. This proposal – extracted from a forthcoming detailed report – would be implemented by a joint venture of industry partners,[9] building on their existing capacity.

The pilot will provide field officers to offer focussed and well-informed mentoring to every new apprentices. These field officers will:

- come from the same trade as the apprentices they are assigned,
- oversee the apprentices they are assigned to through the entire course of their training package where possible,
- maintain an annual minimum number of in-person site visits to each assigned apprentice,
- be kept to manageable apprentice-to-field officer ratios, and
- be on the same sites every day and develop relationships with apprentice cohorts.

Mentoring services will be available for the entire length of an apprenticeship but will be heavily focussed in the first two years of the apprenticeships (when apprentices are at greatest risk of withdrawing). In the first instance, mentoring will be available for new entrants to those enrolled in second year and will progress with this cohort for the remainder of their apprenticeship.

Recommendation: The federal government should fund a pilot industry-led apprentice mentoring program which engages field officers with industry experience to oversee and mentor apprentices throughout their training. The pilot must include a funding stream for training of tradespeople in on-the-job apprentice training and mentoring skills.

2. What could be done to attract more First Nations people as well as underrepresented groups, such as women, Culturally and Linguistically Diverse (CALD) people and people with a disability to the sector and address barriers to greater participation?

[9] Including the Electrical Trades Union, National Electrical and Communication Association (NECA) and Master Electricians Australia.

Attracting more Women into the Electrical Trades

> Informally, in my workplace I've been lucky enough to have a good group of tradesmen who have taken me under their wing and treated me like a sister. They have been genuine and willing to share their skills and knowledge. When you're shown what good work and good work practices look like, you want to rise to that standard and make them proud of your work as well. A good mentoring program should be built around someone going with you through the whole apprenticeship, they should know you personally and be more than just a phone number to text or call when something comes up. A good mentor is one that sets a good example as a role model for what it is to be a professional tradesperson across all aspects of the job.

Zahn Anthony, ETU Apprentice of the Year 2023

Women make up just 2% of the electrical workforce, a percentage that has remained stubbornly low for years. In recent years, the number of women enrolled as electrical apprentices and trainees has risen to 5.25%.[10] This has occurred through targeted programs, developed by the ETU working together with employers and informed by the experiences and advice of ETU women.

Our research and our members' experiences make clear that changes to the incentives system and associated non-financial services and supports alone are insufficient to increase women's participation in the electrical trades. There are several systemic cultural and practical barriers for women in the workforce which desperately need to be addressed.

A 2022 Essential Media survey (see appendix 1) of electrical apprentices found that:

- 23% of female apprentices considered quitting due to work and culture, and women are 53% more likely to consider quitting due to culture than men.
- men are 50% more likely to have regular contact with their AASN than women, and women are 10% more likely to have never received any support from their AASN.
- 40% of women in electrical trades don't have access to gendered amenities at work, and only half report consistent access to sanitary bins.[11]

When women are supported and mentored through their apprenticeship, over 90% go on to long term employment in the sector.

[10] Standing Committee on Employment, Education and Training (2024), *Inquiry into the Perceptions and Shared Status of Vocational Education and Training*.
[11] See also: https://www.etunational.asn.au/wp-content/uploads/2022/03/2108_ETU-Women_Nowhere-to-Go_Report_Draft02_WEB.pdf

The Role of Pre-apprenticeship Programs for Women

ETU Victoria's training facility, The Centre for U, has successfully run the Women in Apprenticeships Victoria Electrical (WAVE) program in collaboration with Holmesglen Institute, Victorian Trades Hall Council, Australian Women in Solar Energy, and the Victorian Department of Education and Training.

WAVE seeks to attract women to targeted information events, recruit them into women-only pre-apprenticeships, and support them with mentoring through the first year of an electrical apprenticeship. The WAVE project won a Gold Industry Collaboration Award at the Australian Training Awards in 2023.

We've had nearly 50 women complete pre apprenticeships since the WAVE program started in 2021, and over 91% of women that start WAVE and complete the pre-apprenticeship move into successful apprenticeships.[12]

Similarly, initiatives in QLD between the ETU and Energy Queensland have seen the percentage of women in annual apprentice intakes in the electricity supply industry rise above the 5.2% average, with the 2024 intake sitting close to 50%.

The ETU has written numerous submissions to government about the important and positive role that gender targets have in boosting boost women's participation in the electrical trades and other VET careers.[13] However targets need to be properly calibrated to ensure that they are met by employing and training women in high-skill pathways and not only those positions that may be easiest to fill for the sake of ticking a box.[14]

The government needs to take urgent action to improve accessibility for women, in order to fulfill its commitment to ILO recommendation R208, sections 21 and 22 which call on governments to:

- Take appropriate measures to promote gender equality and balance in all aspects of apprenticeships, including in access to apprenticeships.
- Take effective measures to prevent and eliminate any discrimination, violence and harassment and exploitation against apprentices and provide access to appropriate and effective remedies.

Recommendation: the federal government should apply appropriately designed procurement targets for women apprentices as a condition of Commonwealth funding. Employer performance must be linked to the provision of suitable PPE, bathrooms, and changerooms being available and suitable for women at all worksites.

Recommendation: federal and state governments should provide support for industry-led RTOs to provide dedicated pre-apprenticeship programs for women, including mentorship from women leaders in the industry.

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[12] The Centre for U (2023), *WAVE success rate over 84%*.
[13] ETU (2021), *Nowhere to Go.*
[14] ETU (2022), *Submission to the Australian Skills Guarantee Discussion Paper*.

Recommendation: the federal government should provide financial support to the industry-led apprentice mentoring programs, recognising that the model is designed to provide direct support to women apprentices through regular contact with women apprentices, mentoring, and monitoring of worksites to ensure compliance with workplace health and safety law regarding harassment and PPE.

Attracting more First Nations People into the Electrical Trades

The Australian Government identified in section 15 of its submission report to ILO recommendation R208, its commitment to providing "priority support" for First Nations apprentices.[15] The ETU has been involved in several programs which support this commitment, including through the Positive Power Mob Program and the First Nations Clean Energy Network (FNCEN). The government should learn from these programs and work with the FNCEN to ensure that the apprentice incentives system is consistent with the Aboriginal and Torres Strait Islander Best Practice Principles.

Positive Power Mob Program

The QLD/NT Branch of the ETU worked in conjunction with the power industry to develop the Positive Power Mob program from 2008 through to 2012. The program was developed in partnership with Qld Aboriginal and Torres Strait Island communities to identify opportunities for participants to engage in an 18 week work ready pre-vocational program to assist in securing apprenticeships and other technical serviceperson roles within the South East Queensland power company Energex Pty Ltd.

Over the life of the program, 30 First Nations workers secured vital work skills, knowledge, and experience with over half of all participants securing electrical apprenticeships in the electrical industry. Each intake only experienced 2 or 3 non-completions, most of which were due to candidates securing other employment during the program. The program was disbanded following a change of government and Energex was no longer able to participate.

First Nations Clean Energy Network (FNCEN)

The ETU participated in establishing and supporting the work of the First Nations Clean Energy Network (FNCEN). The FNCEN is a network of First Nations people, community organisations, land councils, unions, academics, industry groups, technical advisors, legal experts, renewables companies and others, working in partnership to ensure that First Nations communities share in the benefits of the clean energy boom.

The FNCEN recently published a reporting *Powering First Nations Jobs in Clean Energy,* which makes several recommendations regarding how to increase access to training, create employment and develop career paths in clean energy for First Nations Australians.[16] The report includes twelve

[15] Department of Employment and Workplace Relations (2023), Submission Report on ILO Instruments: Convention 191, Recommendation 207, and Recommendation 208.
[16] FNCEN (2024), *Powering First Nations Jobs in Clean Energy*.

recommendations cross climate, energy and industry policy to be taken by Federal and state/territory governments, industry and training organisations.

Six of the 12 recommendations that can be implemented now include:

- Mandating minimum Indigenous Procurement Policy and Australian Skills Guarantee compliance in Capacity Investment Scheme merit criteria.
- Negotiating minimum First Nations employment targets in Renewable Energy Transformation Agreements for solar farms in renewable energy zones supported by pre-employment programs to provide job candidates.
- Reviewing ARENA's and the Clean Energy Finance Corporation's procurement guidelines to incorporate employment and training targets for First Nations.
- Setting up a coordinated scheme for wind farm apprenticeships.
- Mandating employment and training targets in the delivery of First Nations housing retrofit programs supported by training and pre-apprenticeship programs.
- Setting up a First Nations Clean Energy Cadetship Program for First Nations school students in the clean energy sector.

Recommendation: state and federal governments should work with the First Nations Clean Energy Network to implement the recommendations in their *Powering First Nations Jobs in Clean Energy* report.

3. What skills or qualifications are most in demand for clean energy roles, and how can education and training programs better align with these needs?

Clean energy jobs are not a distinct subset of the electrical workforce workforce. Portable and transferable skills already exist and are held by thousands of workers already employed in established industries.

An electrician trains and is qualified as a general electrician irrespective of where they did their apprenticeship or what part of industry they work in. An electrician may work in the petrochemical or fossil fuel generation industries and then, relatively seamlessly, move to renewables. Post trade training may be required as an electrician moves from industry to industry however the base training, qualification and licensing is transferable across industries. The theory and principles around generation don't fundamentally change with the fuel source (wind, solar, gas, coal) but apply across the sectors. This transferability of skills is essential to delivering a flexible and fluid workforce to meet the changing challenges of the energy transition.

Existing electrotechnology qualifications are, largely, fit for purpose and contain nearly all of the skills needed by workers who may be interested in entering the clean energy workforce. The evolving needs of the sector can largely be accommodated with the progressive development of training products and relevant qualifications via the Jobs and Skills Council regime, especially with Powering Skills Organisation.

However, it is the ETU's experience that very few VET providers in Australia – private or public – are equipped or willing to offer renewable energy electives to electrical apprentices undergoing Certificate III training. By way of example, it is reported to the ETU that no TAFE in New South Wales offers apprentices access to train on contemporary battery systems, wind towers, EV chargers, or

solar arrays. To confirm this anecdotal evidence and provide useful data to VET planners, Jobs and Skills Australia should map existing renewable energy units in current training packages *and* the number of renewable energy units that are currently being taught and where they are being taught. This would allow planners to assess whether current training programs are providing suitable offerings in the locations most needed for the energy transition.

This data can then be used to provide targeted support to VET providers to offer these low volume, capital-intensive units in every state and territory will increase the local pool of capable and interested workers for employers to select from and ensure apprenticeship outcomes are reshaped to target the changing nature of the industry sector.

In the absence of these electives being taught at a trade or post-trade level, the ETU has observed an explosion of micro-credentials and proprietary training that have been developed without reference to a Nationally Recognised Framework. This fracturing of training fails to provide people with transferable units of competency and engenders inefficiency in industry, with workers having to repeat largely similar workshops and the like. By way of example, Vestas – a major wind farm developer – will train people on Vestas wind turbines, but this training is not recognised by other developers, meaning a worker moving between companies needs to undergo further extensive inductions and accreditations. A better approach is to offer general renewable energy technology and systems training that is transferable across companies deploying the same technology type.

Recommendation: Jobs and Skills Australia should map existing renewable energy units in current training packages *and* the number of renewable energy units that are currently being taught and where they are being taught. This would allow planners to assess whether current training programs are providing suitable offerings in the locations most needed for the energy transition and provide targeted support to VET providers to offer these low-volume capital-intensive units in the areas that they are most needed.

4. What actions are needed to ensure the clean energy workforce has appropriate skills, competencies and qualifications relating to safety?

Electrical safety has been the core issue for the ETU since it was established. A properly recognised electrical licence regime, maintained through the active participation of the union and employers, is critical to ensuring that electrical work is only performed by qualified workers and does not put workers and the community at risk.

However, electrical licensing alone will not be enough to ensure safety as we look to decarbonise the economy and introduce new technologies. The energy transition will necessarily seek workers increasingly moving between sectors, exposing them to technologies like induction stoves, electric vehicles chargers, or solar, which may have been uncommon – or even non-existent – when the worker originally did their apprenticeship.

Consequently, there is an unambiguous case for requiring post-trade training and accreditation schemes in government financing. Ensuring lifelong learning will be crucial in keeping the workforce – and the community at large – safe from electrical faults.

Post-trade training

Post-trade electrical training is and should be targeted to the specific risks in different parts of the sector. For example, post-trade safety training for the wind industry includes rescue, heights and escape from wind towers, while in the case of solar and Battery Energy Storage Systems (BESS), training will need to include arc flash hazard management. Similarly, large scale renewables have particularly hazards in relation to large fault currents and fire risks that are present often in remote areas, while residential solar and battery installations have particular safety hazards such as fall from heights.

Currently, a significant proportion of this training has been developed in an ad hoc manner or as proprietary training packages. There is a role for Powering Skills Organisation (PSO) to identify post-trade training needs and develop national recognised post-trade units of competency to ensure that workers can safely move between parts of the electrical sector and take up opportunities as they become available. This training could also be offered to apprentices in the electrical trades as electives.

Accreditation for government financed installations of electrical upgrades

Household electrification is one area is one area where licencing and post-trade training alone may not be enough to ensure the safety of workers and the broader community, and where a broader accreditation program linked to the disbursement of government financing will be critical.

The government has currently provided $1 billion for the CEFC to assist private financial institutions offering low-cost finance to private households seeking to make energy efficiency and electrification upgrades to existing homes. The arm's length funding model filtering, Commonwealth finance through competitive financial markets, has historically resulted in the CEFC applying limited safety and quality requirements to funding with no deliberate mechanism for delivering social benefit.

Ensuring safe, high-quality installations is essential for protecting workers, consumers, and the long-term social license of any residential electrification initiative. Household energy upgrades have an added risk when compared to small scale solar, in that most of the installation work associated with small scale solar is external and usually out of reach to the ordinary household occupants during both installation and operation. Consumers, including children, the elderly, and disabled, will have direct access to be in close proximity to residential upgrades, like EV chargers and induction cooktops. That people will be to physically touch operating such apparatus, which carry extremely high charge, means that the electrical work needs to be done perfectly every time.

Concerns about the quality of installations under a residential electrification program go hand in hand with skilled workforce considerations. A failure to provide an adequate skilled workforce to meet demand for residential upgrades will cause frustration and delay for consumers, raise labour costs, and incentivise the proliferation of unqualified "cowboy" operator looking to make easy money. Even workers with considerable experience in the domestic sector will require upskilling and retraining to familiarise themselves with new types of work, appliances, and standards. This goes extra for electricians with only limited experience in the domestic space, having transitioned from a different part of the sector.

Verifying that scheme participants are appropriately skilled and aware of safety and technical requirements is a critical element of any successful accreditation scheme. Collaboration with

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industry stakeholders and the VET sector to get the balance between depth and accessibility right is pivotal to building an upskilling product that lifts industry standards.

Licensing and WHS regulators need to play a frontline role in monitoring and enforcing compliance with relevant standards on installations under any future household electrification program and will need significant additional resourcing to do so. An effective accreditation scheme must incorporate monitoring and enforcement as well as respond to information from the broader regulatory environment to maintain the program's integrity. Enforcement of non-compliance should happen on a graduated basis, from fines to having access to program certificates suspended or revoked depending on the severity of any breach.

5. What actions are needed to ensure clean energy jobs offer attractive pay and conditions, security, and safety?

The transition from fossil fuel to renewable energy means a rapidly accelerating number of workers moving from older to newer energy projects. Alarmingly, it has become clear this often also means a step down in wages and conditions. Poor pay in new energy projects means economic growth that fails to improve individual and community wellbeing. At a time of critical workforce shortages, there is urgent public interest in ensuring poor working conditions do not drive workers away from the energy industry, especially younger workers.

We need a new approach to energy wages and conditions that embraces the challenge of workforce reform and protects Australians' interest in our energy system. Mandatory *Clean Energy Workforce Standards* should be adopted in any project funded through public investments of the Clean Energy Finance Corporation (CEFC) and other Special Investment Vehicles, starting with the Rewiring the Nation scheme.

Clean Energy Workforce Standards will serve to maintain healthy and competitive employment conditions and strong training requirements, such as apprentice ratios. The standards will improve recruitment into the industry and help to grow social licence for new energy projects.

We propose principles that build from leading state government frameworks for government finance that embed minimum standards, including guarantees of:

1. worker safety;
2. wages and conditions;
3. skills, training and apprenticeships;
4. local content;
5. First Nations engagement; and
6. workforce composition.

Australia's energy system has developed and grown through decades of strong public investment and ownership of operating assets and the efforts of hundreds of thousands of energy workers engaged in operations. As a nation, we will be incapable of rising to the challenge of delivering this energy transition if it's to be built on a race to the bottom with wages, conditions and safety – we simply won't get the workforce.

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The Clean Energy Workforce Standards go directly to creating and retaining the needed workforce whilst dealing better outcomes for regional Australia.

6. What remaining barriers are there to increasing training capacity for clean energy occupations, particularly in regional areas that are not being addressed, or require more intervention?

The role of GTOs in increasing apprentice numbers on renewable energy projects

Rates of apprenticeships in the renewables sector are particularly low. The ETU has seen widespread failure to employ apprentices at all, or in sufficient numbers, in projects across Australia. These projects are often in receipt of state and federal government funding yet do little to invest in developing the future electrical workforce.

The sector argues that the low rates of apprenticeships are due to:

- the remoteness of the projects;
- the projects' time-limited construction phase, which is typically significantly shorter than the length of an apprenticeship; and
- individual projects not offering the full scope of on-the-job experience required to complete an electrical apprenticeship.[17]

These features are neither new nor specific to renewable energy projects. Most of Australia's extant resource projects are in remote Australia. All construction projects are, necessarily, time limited. Many, perhaps most, elements of industry cannot provide an apprentice the full scope to meet profiling requirements (e.g. aluminium production, steel production, large scale food manufacturing, or Coal fired generation).

These challenges have been successfully tackled by other industry sectors through utilising Group Training Organisations, allowing apprentices to easily move through different host employers as projects conclude or as is need for profiling.

No construction job is a job for life, with workers made redundant at the end of each project. In the metro and resources sector, this problem has been addressed with the use of GTOs. This is also the case on remote infrastructure projects, such as Inpex, where GTOs have been widely used.

The Benefits of GTOs

UTS's Institute for Sustainable Futures and SGS Planning conducted research for the NSW State government to scope opportunities to increase local employment, apprentices in NSW renewable energy and associated supply chain projects.[18] This work drew on significant previous research conducted by the centre and included the objective of understanding how to implement the NSW Government's own apprenticeship targets set through the NSW RESB plan.

[17] Briggs, C. et al. (2022), *Employment, Skills and Supply Chains: Renewable Energy in NSW*.
[18] Briggs, C. et al. (2022), *Employment, Skills and Supply Chains: Renewable Energy in NSW*.

The Institute found that:

> Group Training Organisations: GTOs will be critical to enabling increased levels of apprenticeships and there are examples of successful initiatives but equally reports that uptake is not as high as it could be. Developing locally available GTOs should be a key priority for developing training market capacity.[19]

Employers benefit from the GTO model by gaining access to a reliable source of high-quality apprentices in all stages of apprenticeships, ready to acquire the necessary skills for each project phase.

Small to medium sized employers make up a significant proportion of GTO host employers, many of which would struggle to take on apprentices via direct employment. GTOs remove much of the administrative and regulatory burden from host employers because, as the direct employer, they are responsible for meeting all employer obligations, paying wages and entitlements, arranging formal training and assessment and providing support to apprentices.

The GTO model also facilitates better and early access for the apprentice to vital safety information including basic instruction for apprentices on how to keep themselves safe, such as being armed with the knowledge of how to say no if a work task is unsafe, how to use Lock Out Tag Out when working on the electrical installation, and how to test for live voltages. This information can be overlooked by individual employers especially if an apprentice is not enrolled in trade school at an early stage of the apprenticeship.

Finally, a recent NCVER study on completion rates found that "GTO completion rates are substantially higher than [completion rates] for small and medium direct employers".[20]

In their report for the NSW State government, Briggs et. al. identified that GTOs can be reluctant to extend their activities into new sectors and regions until there is funding certainty, and certainty that they will attract sufficient market volume to be viable.[21] The report noted that REZs provided sufficient scale to attract GTOs, however, there was still a need to coordinate industry in order to pool industry demand and collectively meet apprenticeship targets. The authors recommended that the NSW state government create a tender for GTOs, attached to each REZ, with each tender able to be awarded to a single or multiple GTOs.

The First Nations' Clean Energy Network's *Powering First Nations Jobs in Clean Energy* report also found that including a GTO tender in every REZ, in order to establish at least one GTO in every REZ, could be used to meet and exceed First Nations apprenticeship targets. However, the report notes that any tender for GTOs must include an initial investigation to develop targeted programs and

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[19] Briggs, C. et al. (2022), *Employment, Skills and Supply Chains: Renewable Energy in NSW*, p. 102.
[20] Lisel O'Dwyer and Patrick Korbel (2019), *Completion Rates for Group Training Organisations and Direct Employers: How Do They Compare?*, p. 7;
[21] Briggs et. al. (2022), Skills Audit for Renewable Energy in NSW.

address concerns from First Nations apprentices about not being directly employed by a local company.[22]

Recommendation: That the Federal Government, in consultation with industry, should develop and implement trial projects in which a GTO is appointed to a REZ. All relevant renewables projects within that REZ would be required to either engage apprentices directly or engage apprentices through that GTO, to provide certainty for a GTO to expand into that region and improve the facilitation of workers into apprenticeships.

7. Do you consider worker retention in the clean energy sector to be a concern? If yes, what would help to retain more workers, particularly women?

A key factor impacting the retention of women in the electrical workforce is harassment – solutions to this are addressed in question 2.8.

In addition, much more work needs to be done with respect to:

- industry culture;
- hours of work;
- access to childcare (noting that caring responsibilities disproportionally fall on women);
- ubiquitous access to female amenities;
- promotion of trades to women;
- clustering of women on projects with women industry leaders, setting women up to succeed.

The National Construction Industry Forum, chaired by the Minister for Workplace Relations, has undertaken considerable work in this field and should be actively engaged with.

8. What actions could help to reduce the risk of bias and harassment in the workplace?

> Government needs to seek those builders that can demonstrate that they have best practice policies and procedures in place, that they have a genuine commitment to changing culture… procurement policies need to include all of those culture training issues, good EBA practices that include stuff around retention for women, that include good family work practices, that include good discrimination, harassment policies and procedures.[23]

[22] First Nations Clean Energy Network (2024), *Powering First Nations Jobs in Clean Energy*.
[23] Participant 42, Holdsworth, S. et. al. (2020), *Women in Construction: Exploring the Barriers and Supportive Enablers of Wellbeing in the Workplace*, p. 91.

We know sexual assault and harassment is a gendered issue affecting women in the workplace. The electrical trades are no exception. The Australian Human Rights Commission identifies several factors that increase the risk of experiencing sexual harassment at work, including that the sector is male dominated due to:

- the gender ratio;
- the over-representation of men in senior leadership roles;
- the nature of the work being considered 'non-traditional' for women; or
- the masculine workplace culture

The report *Women in Construction: Exploring the Barriers and Supportive Enablers of Wellbeing in the Workplace* found that 1/3 women had experienced negative incidences at the workplace, ranging from gender discrimination to assault on site, and that many employers were not meeting their obligations to provide a safe workplace for women.[24]

The ETU made a submission to the *National Inquiry into Sexual Harassment in Australian Workplaces,* which collected the experiences of harassment of our women members on sites around Australia.[25] A survey of women members conducted to inform that submission found that electrical industry respondents were more likely to report sexual harassment than the broader membership of the ACTU, however, they were three times more likely to experience less favourable treatment in their workplace than the broader group.

Similar to the *Women in Construction* report, ETU members reported that employers are failing to adequately deal with sexual harassment on site and are failing to offer support – even punishing individuals reporting sexual harassment. For example:

> [A senior female apprentice] was often working with younger school-aged female apprentices—aged around 16 and 17. When the supervisor, who was in his 50s, started inappropriately approaching the young girls, she stood up to him and management's lack of action and spoke out about the behaviour. She has since been blacklisted from this major construction company because of this.[26]

A review of the literature by the *Women in Construction* report points to three primary drivers for this behaviour:

- women are seen as outsiders in male dominated industries
- consequence-free behaviour – which includes a lack of workplace support for managing inappropriate behaviour, and little or no consequences for people acting inappropriately
- culture of silence, including a lack of transparent processes for reporting inappropriate behaviours, and a fear of punishment for reporting inappropriate behaviours.

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[24] Holdsworth, S. et. al. (2020), *Women in Construction: Exploring the Barriers and Supportive Enablers of Wellbeing in the Workplace*, p. 7.
[25] ETU (2019), *National Inquiry into Sexual Harassment in Australian Workplaces*.
[26] ETU (2019), *National Inquiry into Sexual Harassment in Australian Workplaces*, p. 8.

The Respect at Work Act inserted new provisions that expressly prohibit sexual harassment at work. It also provided for the granting of remedies when sexual harassment occurs and introduced a new dispute resolution function for the Fair Work Commission (FWC).

Despite this, women members are still reporting significant failures by employers to provide safe workplaces for women workers. Even where policies and procedures do exist, there is often a failure to meaningfully enforce these policies, to ensure that victims are protecting in raising complaints about inappropriate, and sometimes violent behaviour. The experiences of our members are echoed in the experiences of survey respondents in the *Women in Construction* report.

The findings and recommendations of the women in construction report are largely applicable to our members experiences on large, clean energy projects. As argued in the report, there is a role for all players in the industry to improve the experiences of women on site – from employers to government and training organisations. Their recommendations to government are included below, however for these to be effective all organisations must take responsibility for creating safe, positive work environments.

Recommendation: Government should use procurement practices to affect change and improve the experiences of women in the clean energy trades. This must go beyond a simple metric of the number or percentage of women on site and include requirements that demonstrate on how companies will provide a safe and positive work environment, thereby complying with requirements under the Respect @ Work Act.

9. Do you think there is a need to improve ease of mobility of workers between states or from overseas? If yes, what could be done to improve mobility?

Recognition of electrical licences across state borders

The ETU understand the necessity of occupational mobility to address several issues faced by Australian business, workers and community, these include:

- Skills shortages
- Major projects
- Cross-border employment
- Personal relocation
- FIFO short-term projects

However, unlike other industries, the electrical industry has complex regulatory requirements, necessitated given our industry is highly complex, everchanging, and one where there is a serious risk of injury or death to workers and community. This comprehensive regulatory environment requires parties to be fully invested in the licencing scheme of their state, to reduce the risk of accident or infringement.

In early 2021 , Morrison Federal Government passed legislation that allows workers who are registered or licensed for an occupation in one state or territory to be considered automatically registered or licensed to work in a different jurisdiction with no additional checks. It creates a race to

the bottom for licensing requirements and safety standards nationally, which is problematic for high-risk occupations like the electrical trades.

Unlike other occupations that would benefit from the scheme, for electrical workers the significant differences between licenses and registrations from state to state would leave electrical workers exposed to falling foul of another state's rules that they might be unfamiliar with. It could also lead to workers performing unsafe or illegal work simply because they were unaware of the different legislative requirements of another state. Industry experts have warned that there could be potential fatalities in our communities if the federal government's model is adopted as it would create a race to the bottom for electrical licensing standards.

Automatic Mutual Recognition can only occur safely and effectively if we have nationally consistent electrical safety legislation. Currently, Australia has a range of jurisdictions with outdated regulatory frameworks, which need to be brought up to standard. This harmonisation to the highest standard must occur before introducing automatic mutual recognition.

Recommendation: government should seek to harmonise state based regulatory frameworks and licencing standards to the highest common standard, to facilitate mobility between states to work on clean energy projects and ensure the highest standards of licensing apply.

Trades Recognition

While the knowledge and skills of many overseas workers is very high, there are differences in the manner in which this technical expertise needs to be applied, a difference that represents a critical skills gap. Electrical Regulators are especially concerned that this gap be addressed in regulated trade vocations such as electrical, refrigeration and air conditioning, electrical linework and cable jointing, where the work context may differ markedly in overseas countries and where such differences could endanger lives, infrastructure or systems.

The pathway for skilled migrants with equivalent or similar qualifications as those required in Australia is via a skills assessment with a Trades Recognition Australia approved Registered Training Organisation. If successful, an applicant will receive an Offshore Technical Skills Record and can then apply with the relevant state or territory licensing authority for a provisional license, registration or certificate. The candidate will be permitted to work under supervision whilst completing Australian context gap training.

A key gap in the system is the lack of established processes for energy qualifications outside the electrician and air-conditioning and refrigeration mechanic qualification. Further aggravating the challenge was the decision in 2019 by the Morrison Government to abolish the Trades Recognition Services (TRS) program which provided a pathway for migrant workers already in Australia to have their skills assessed and verified onshore. The abolition of TRS has resulted in an increase in migrant workers being targeted by unscrupulous training providers promising quick skills verification processes that ultimately do not lead to a licensed outcome leaving the migrant worker both out of pocket and unable to work in their profession.

Currently skills recognition for overseas workers in the Electricity Supply Industry is disjointed and fragmented as there is no national industry endorsed skilled migration program, process or pathway. Unlike the Electrician and Air-conditioning Mechanics qualifications, the Certificate III level

Transmission Overhead qualification has no Trades Recognition Australia approved pathway, leaving overseas trained workers with no clear pathway for their skills to be assessed and verified or to secure the appropriate Australian Context Gap Training necessary to achieve an Australian qualification or electrical licence.

In addition, transmission projects need a supply of a highly skilled Certificate II level Overhead Transmission workforce to assist in the construction and erection of transmission towers. Equally there is no formally agreed pathway for these workers to have their skills assessed and verified or to secure the appropriate Australian Context Gap Training necessary to achieve an Australian qualification.

In other words, there is no pathway for a Line Worker Certificate II which is recognised as a skills shortage and a qualification required to build the 10,000 km of transmission infrastructure in Australia's move to renewable energy. The transmission lines required are essential in the connectivity of renewable energy generation and a key component in Australia's New Energy Future. Certificate II qualified line workers are required to erect transmission towers and string transmission lines.

Recommendation: the Federal Government reinstate a program for OTSA pathways to alleviate some of the significant costs associated with OTSA. If carefully co-designed with industry, not only could the existing systems be streamlined for electricians and air-conditioning and refrigeration mechanics, but the system could be expanded to include clear pathways for other energy sector trade qualifications.

Recommendation: the Federal Government invest in streamlining skills assessment for potential migrants from countries with comparable qualifications who want to work in Australia's clean energy industry in skilled electrical trades occupations.

10. Does skilled migration help address workforce or expertise shortfalls? If yes, what are the barriers to engaging overseas workers that need to be addressed?

The electrical trades have been in shortage since at least 1981,[27] and the occupation has been identified as one experiencing skill shortages on the Skills Priority List (SPL) for the last three years.[28] The current shortage in the electrical trades is only predicted to get worse, with Jobs and Skills Australia predicting that Australia will face a shortfall of 32,000 electricians by 2030 to meet the government's "rewiring the nation" policy settings, and a shortfall of 42,500 to meet the more ambitious policy settings announced under the government's Future Made in Australia and Renewable Energy Superpower scenarios.[29]

[27] ETU (2024), Capacity Investment Scheme (Implementation Design Paper.
[28] Jobs and Skills Australia (2023), *Australian Government, 'Skills Priority List September 2023 – Historical' (Spreadsheet, 2023).*
[29] Jobs and Skills Australia (2023), *The Clean Energy Generation – Supplementary Modelling Report*.

Given the scale of this challenge, migration will have a role to play, however it's important to note that if temporary migration was an effective strategy to address this ongoing and critical shortage, it would have done so by now.

The ETU has never opposed skilled migration, subject to three core principles: it must not be used to undercut industry conditions, it must not be used to suppress training opportunities, and it must be free of visa exploitation.

The ETU has proposed an industry-based approach to migration that includes pathways to permanency for migrant workers and greater employer investment in training the domestic workforce, whilst at the same time addressing the drivers of exploitation of migrant workers.

Electrical Industry Labour Migration Agreement

The ETU commends the Australian Government's work in developing the Aged Care Industry Labour Agreement that lays out a comprehensive and sensible path to skilled migration in this critical industry. We propose a similar agreement for the electrical trades.

The Electrical Industry Labour Agreement (EILA) must:

1. Ensure that migrant workers are employed on the same conditions as the domestic workforce.
2. Provide strategies to develop the domestic workforce capacity through investment in skills and training by establishing union collective agreement terms which includes:
    a. minimum apprentice ratios of not less than 1 apprentice: 5 tradespersons,
    b. initiatives to engage women, First Nations and other underrepresented cohorts on projects,
    c. a genuine transfer of knowledge to the domestic workforce; and
    d. application of a robust offshore and onshore technical skills assessment pathway for any overseas workers engaged on projects
3. Involve the union in all stages of onboarding migrant workers from the skills assessment and verification processes through to on-job access, to remove all forms of worker exploitation.
4. Provide pathways to permanency after two years for migrant workers engaged on projects.

The current model of identifying and addressing skills shortages through the skills occupation list is not fit for purpose. It does not address the structural drivers that have led to an occupation being in shortage, and it leaves migrant workers exposed to exploitation through a reliance on their employer to remain in the country. The ETU's EILA proposal addresses these issues, and we recommend to government that it looks to reform how it approaches skills shortages through migration by adopting an industry-led approach such as the one proposed here.

Recommendation: Work with unions and industry to implement an Electrical Industry Labour Agreement (EILA) to protect migrant workers from exploitation and provide strategies to develop the domestic workforce capacity.

Reform of the Working Holiday Visa

The Working Holiday visa (subclass 417) and the Work and Holiday visa (Subclass 462) (WHVs) is meant to be a temporary visa for young people who want to holiday and work in Australia. There is substantive evidence that the requirement for WHV workers to work for 88 days in regional areas to qualify for a second-year visa leaves them regularly exposed to often severe exploitation.

The ETU has found evidence of serious safety issues facing electricians and unqualified backpackers working on large-scale solar farms in remote sites across Australia. At one project in Queensland, the ETU found that half the workforce were backpackers working on 88-day holiday visas, many of them completing electrical work which they were not qualified to do. At another solar project, non-electrical workers were seen doing high-risk work in knee deep water and mud, risking electrocution to themselves and other workers.[30]

The ETU notes the Migration Strategy commitment to evaluate regional migration settings and the Working Holiday Maker program in 2024 to ensure that migration supports development objectives in regional Australia and does not contribute to the exploitation of migrant workers. This must include abolishing the 'specified work', typically in regional areas, required to become eligible to extend their stay.

Recommendation: the federal government should abolish the requirement of 'specified work' for extending the length of a Work and Holiday visa (WHV).

Improving Workforce Data and Information

1. How far ahead of time are businesses able to anticipate the workforce needed for a clean energy project/development? Is this type of data something that could be provided to government for planning purposes?

Different aspects of the energy transition have differing lead times and differing dynamics. In the utility scale space, where lengthy development application processes are needed, the workforce needs can be anticipated well in advance. Please see the ETU's proposal for GTO coordination at page 18.

2. What work has been undertaken by industry and unions to project/estimate clean energy worker/skill demands ahead of time, particularly for local study/training/recruitment purposes?

The ETU is a foundation member of Powering Skills Organisation (PSO), the Jobs and Skills Council (JSC) for the energy sector. JSCs develop and review current training packages for relevance and consistency with industry, learner and VET needs, with PSO responsible for the training framework that underpins the energy sectors. This includes identifying skills and workforce needs for the Energy sectors, mapping career pathways across education sectors, developing VET training products, supporting collaboration between industry and training providers to improve training and

[30] Herbert, B. (2024), 'Electricians and Backpackers Sound Alarm about Unsafe Conditions on Solar Farms', *ABC News* (Online, 11 April 2024).

assessment practices and provide relevant data on issues affecting the sector. They must also ensure that any training package is aligned with legislative requirements, including licencing and safety items, and ensure that regulatory and licensing requirements are not bypassed.

3. What qualitative and quantitative data have you collected/do you plan to collect relating to the clean energy workforce? Are there data sources available that are new or underutilised?

N/A

4. Are there any data limitations that restrain the planning and/or progression of clean energy projects or precincts?
5. What data or information would help with workforce planning? Why is this data needed? This could include more detailed data on the current workforce and/or analysis of future workforce needs.

In the ETU's submission to Jobs and Skills Australia 2024 – 25 Workplace Development Public Consultation, the union highlighted additional mapping that should be undertaken by JSA to support ongoing workforce planning efforts and to properly inform government investment in the VET sector, and to contemplate the appropriate incentives and conditionality through Government investment to enable Australia to meet and surpass its renewable energy targets.

While the Clean Energy Generation report makes clear that we need to increase the number of people starting and completing apprenticeships, it does not examine the capacity of the current VET system to deliver these apprentice numbers at the pace and in the locations required for the energy transition nor does it currently map the capacity of industry to employ more workers, particularly apprentices. This information is needed to properly inform government investment in the VET sector, and to contemplate the appropriate incentives and conditionality through Government investment to enable Australia to meet and surpass its renewable energy targets.

Mapping Training Capacity in Clean Energy Skills

The Clean Energy Capacity Study provided clarity around Australia's future workforce needs under different transition scenarios, however it did not look at the available capacity in enabling sectors like VET and higher education, or the capacity of existing industries to provide training.

Training Capacity of TAFEs and Not-for-Profit Training Providers

The ETU has observed a significant backlog in multiple trade schools at present, which impacts their capacity to engage more apprentices. In some instances, the union has observed apprentices experiences a 12 – 18-month delay between a first year commencing their apprenticeship and then getting into their first block of training.

The ETU proposes that JSA undertake comprehensive mapping of existing training places, and any current backlog of apprentices waiting to access training. JSA should also look to disaggregate total demand for electrical workers by region, taking into account current policy settings for the energy transition. A comparison of this data would allow JSA to identify critical gaps in training capacity that are likely to put the energy transition at risk, and to make recommendations to planners about

where new places and/or new training centres should be created. Finally, the analysis should include the VET sector's capacity to put sufficient trainers into classrooms.

Training Capacity of Existing Employers

The separation of the demand for qualified workers and capacity of institutional training fails to account for the interplay between educators and employers in the apprenticeship pathways that many key roles in the clean energy workforce will utilise.

Trade qualification pathways with apprenticeships that require on-the-job training will also require initial and ongoing assessments of the available training capacity of existing employers to provide a complete picture of our capacity to train a skilled workforce.

The ETU proposes that JSA undertake comprehensive mapping of the existing capacity and capability of businesses to employ apprentices, to allow planners to:

- Identify where there is capacity to start addressing skills gaps in the near-term;
- Develop strategies to create additional opportunities where training capacity is insufficient to meet current or future demand; and

Identify reasons that individuals or industry sectors may not be contributing their share and develop strategies to address this.

This mapping should include the collection of data on the capacity and capability of all businesses in the clean energy and related sectors to train apprentices and new workers. This data should be collected on all businesses with workforces over a set threshold (e.g. 30 employees), and could categorise employers individually, by sector, and by region, into:

- those not employing apprentices;
- those employing some apprentices but with capacity to employ more; and
- those at or close to full training capacity.

The ETU also recommends the collection of data on these businesses capability to train new workers through metrics such as their historic apprentice completion rates. In undertaking this mapping, JSA should look to include firms across power generation, supply, safeguard mechanism facilities, commercial and industrial construction, and should not be restricted to clean energy businesses. Historically, safeguard facilities encompassing large distribution and transmission companies have trained a significant proportion of apprentices. However, under current tender arrangements, which privilege cost over broader value for money (including apprentice training and development) these businesses are no longer appointing apprentices.

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Coordination

1. What clean energy workforce policy/planning coordination do you think is needed nationally and what governance and other arrangements are needed to facilitate necessary coordination?

2. What type of coordination role should the Commonwealth Government play?

3. What resources or information would make it easier to navigate? – including resources for industry, unions, government, and the general public in particular job seekers and students?

The government's decarbonisation agenda is unprecedented and cuts across all sectors of the economy, and all regions in Australia. The ETU has made submissions to each of the sectoral decarbonisation plans, noting that while each plan recognises the need for a dedicated workforce strategy, there is little detail provided about how the plans will work together, rather than competing for the same pool of workers.

A comprehensive strategy is crucial to implementing these strategies and ensuring that these strategies have a coordinated approach to new energy workforce development. When related strategies operate in siloes, opportunities to share learning are missed, and areas of conflict may arise.

To break down these silos and ensure that sufficient investment in training and workforce development is occurring where and when it is needed, the ETU has proposed that the government create a Clean Energy Jobs Advocate. Modelled on best practice international examples, such as the role of Director of the Office of Energy Jobs in the US Department of Energy, the Advocate would be appointed to coordinate and support Australian Government energy workforce policy.

The role would support engagement with industry: employers and trade unions, the training sector and state and commonwealth departments to drive improvements in career and training outcomes.

The Queensland Government has already established the role of the Renewable Energy Jobs Advocate to:

> …provide advice to the Minister in relation to opportunities for employment and workforce development in the energy industry, undertaking relevant research, and promoting the benefits of projects relating to renewable energy to the community.[31]

The *Clean Energy Jobs Advocate* would be a dedicated, statutory role with responsibility to support and assist government through the energy transition and provide planning and coordination of work programs across departments and all levels of government. The role would work with all stakeholders to coordinate and facilitate access and uptake by industry and training bodies to ensure

[31] Queensland Government, (2022), *Queensland's Clean Energy Workforce Roadmap- Delivering the Workforce for Our Energy Transformation*, p. 22.

jobs created are in roles that are needed, sustainable, and support further workplace learning and development.

Recommendation: the Federal Government should establish a *Clean Energy Jobs Advocate* as a dedicated statutory role with responsibility to support and assist government through the energy transition and provide planning and coordination work programs across departments and levels of government. The Advocate would work across all levels of government and with all stakeholders, including unions and employers, to coordinate and facilitate access and uptake by industry and training bodies to ensure jobs created are in roles that are needed, sustainable, and support further workplace learning and development.

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Appendix 2: Examples of Failures to Employ Apprentices on Renewables and New Transmission Projects

The following are a selection of case studies from ETU branches that provide examples of significant failures to employ apprentices on government funded clean energy projects.

Project Energy Connect, NSW

PEC is Australia's largest energy transmission project, involving 900km of new 330KV high voltage transmission lines to connect NSW and SA. Green Light Contractors (GLC), a subsidiary of Elecnor Australia (Elecnor), was awarded the contract for the design and construction of the NSW section by Transgrid. GLC has a current labour migration agreement (LMA) to provide migrant workers to PEC.

The project is slated to create 1500 jobs on the NSW section alone. ETU organisers report that there are 1200 workers employed at any one time on the site, including over 400 overseas workers employed via an LMA, who are paid $10/hour less than domestic workers. The ETU has identified systemic abuse of overseas Filipino workers on PEC. This includes:

1. being hired in lower roles than they are qualified to perform at home, and being paid $10/hour less than the domestic workforce employed on the Project with the same qualifications;
2. not being provided with culturally appropriate food and/or not being allowed to cook their own food;
3. being put on different roster rotations than the domestic workforce, with Filipino workers reporting that they are expected to work 8 weeks straight before being rostered for two weeks off – in that period, they are only given one day off every 14 days – raising significant concerns about fatigue on site, especially when compared to the two weeks on, one week off roster for the domestic workforce.

Workers also report instances of being served food that was out-of-date – including rotting food – and instances where the worksite kitchen has failed to properly cater for the workers on site and run out of food.

At the same time, TransGrid and Elecnor have not hired any apprentices to work on PEC. GLC was instead engaged to hire "up to" 100 trainees completing a Certificate II, which involves training in "basic operational knowledge" of "mainly routine work" with "limited complexity". There appears to be no commitment to use the opportunity to train a domestic workforce to an advanced standard, with trainees only offered an 18-month Certificate II qualification with little skill transferability and no direct Cert III trade qualification pathways.

Hunter Transmission and Renewable Generation Projects, NSW

The NSW branch reports that significant, government funded renewable and transmission projects are failing to employ sufficient – or even any – apprentices, including the Hunter Power Project and Waratah Super Battery. This is in the face of ongoing shortages of electrical trades, and employers needing to look beyond the region to employ qualified trades people.

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Hunter Power Project, Kurri Kurri

The project has an obligation to employ a minimum of 10% apprentices – the company is currently failing to meet this obligation. The company conducted several expressions of interest to meet their obligation to employ 65 apprentices (based on a 650 strong workforce). However, as of May 2024, less than 20 potential apprentices had been offered an apprenticeship and none had started as apprentices on the project. Even if all the successful applicants took up their apprenticeship, the company would still only meet 1/3 of their obligation.

The company also has obligations to hire indigenous apprentices. The union has identified no indigenous apprentice that has been offered an apprenticeship but is yet to start on site.

This shortfall in the number of apprentices employed relative to the company's obligations is ongoing, despite the union having raised the issue with the relevant Minister in December 2023.

Waratah Super Battery, Munmorah

CPP is the main contractor at the Waratah Super Battery. The union has only identified three apprentices employed on the site, relative to a total daily workforce in excess of 100-150. Electrical work on the project has been going on for approximately 12 months, and even longer for civil and other trades. Despite union engagement regarding the failure to comply with their obligation to employ a minimum of 10% apprentices, the company has failed to increase the numbers of apprentices on site.

Shortages and Apprentice Employment across the Hunter Region

Via our delegates, the ETU has identified several prospective applicants who are interested in undertaking an electrical apprenticeship. The branch has identified a GTO and training provider, Electrogroup Training, as a provider who could place apprentices on projects across the region, to allow these projects to meet their 10% apprentice obligation.

The failure to employ apprentices on these projects has repercussions on projects across the Hunter region, where there are significant shortages in the electrical workforce. The local organiser currently looks after projects with a combined value of $11 billion, ranging from infrastructure projects to high rise residential construction. A number of these projects are currently looking for electrical trades and unable to fill roles. For example, the Eraring Battery Storage facility is starting to ramp up and will require an additional 60-80 electricians for this project alone. The Hunter Power Project currently has around 170 electricians and is sourcing additional labour from Sydney and interstate.

MacIntyre Wind Farm, Queensland

MacIntyre Wind Farm is a 1,026-MW wind power complex under construction southwest of Warrick in Queensland. With a total investment of AU$1.96 billion, the 1,026MW MacIntyre Wind Farm Precinct is being developed by Acciona and is one of the largest onshore wind farms in the world.

The project is approximately 70% completed and there are around 500 FTE construction workers on the project, many of whom are 88-day working holiday visa workers.

The wind farm construction and high voltage reticulation work is all being performed by Acciona who employ no apprentices on the project. As part of the project, new high voltage substations also need to be constructed to connect the high voltage reticulation network.

The failure to employ apprentices on this project is not due to the lack of demand for apprenticeships in the region. Yurika, a subsidiary of Energy Queensland Limited has the contract for the substation construction, have a regular supply of apprentices who are rotated through the substation part of the project. If a GTO was appointed to the region *and* there were minimum apprentice ratios on government funded procurement projects, the MacIntyre Wind Farm could be providing training opportunities to a significant number of apprentices over the life of the project.

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