

NSW 2030 Renewable Energy Workforce Plan



The roadmap and its skills challenge

Net Zero

The NSW Government is committed to effective action on climate change to ensure a sustainable and fair future for the people, economy and environment of NSW. Through the *Climate Change (Net Zero Future) Act 2023*, the NSW Government has committed to emissions reduction targets for NSW including a 50% reduction on 2005 levels by 2030, a 70% reduction on 2005 levels by 2035, and Net Zero by 2050.

Electricity Infrastructure Roadmap

The roadmap is the NSW Government's primary vehicle to reach Net Zero. The roadmap is the government's plan to modernise its electricity system by coordinating investment in renewable energy generation, storage, transmission and firming infrastructure. The roadmap aims to support the delivery of at least 12 gigawatts of new renewable energy generation and 2 gigawatts of long-duration storage by 2030.

Renewable Energy Zones

A key pillar of the roadmap is the delivery of Renewable Energy Zones (REZs) across NSW. These REZs cluster and connect large-scale renewable energy projects to capitalise on economies of scale and deliver clean, affordable and reliable energy. Five REZs have been declared to date including the Central West Orana (CWO), Hunter-Central Coast (HCC), New England (NE), South West (SW) and Illawarra.

The Skills challenge

Research commissioned by the government projected that the roadmap will create up to 7,000 new jobs across the state. Many of these jobs are expected to be in areas of skills shortage, such as electricians, metal trades workers, and civil and electrical engineers. Of the 38 'critical occupations' identified by Jobs and Skills Australia's (JSA) Clean Energy Capacity Study, about 28 are already in skills shortage in NSW according to JSA's 2023 Skills Priority List.¹ These jobs are also expected to be in high demand across various sectors, such as construction, mining, advanced manufacturing and defence. Given the number of jobs required each year to deliver the roadmap is projected to fluctuate between some 16,000 and 22,000 jobs, coordinating the re-skilling and re-deployment of skilled workers over time also presents a challenge.

These challenges highlight the need for the government to coordinate a joint effort across industry, the education and training sectors, regional communities and others to attract, train, employ and support the workforce required. Our consultations have also highlighted the importance of ensuring the roadmap leaves a positive skills and employment legacy for affected communities, particularly under-represented groups such as First Nations Australians and women.

To coordinate and develop the skilled workforce needed to deliver the roadmap and ensure the roadmap delivers skills and employment outcomes for affected communities, the NSW Government has committed to developing the 2030 Renewable Energy Workforce Plan in consultation with the sector. Building on the Renewable Energy Skills Roundtable held in June 2024, the NSW Government is undertaking public consultation over September and October 2024 to help shape the workforce plan.

Outcomes and Challenges

VISION

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Pillars	Awareness	Access	Support	Equity	Mobility
Outcomes	Students are informed about, interested in, and get a taste of renewable energy pathways	Students can access renewable energy pathways where there are renewable energy jobs	Students are supported through renewable energy education, training and employment pathways	Under-represented cohorts have a fair share of renewable energy opportunities	Employers can access skilled workers from other sectors, regions and countries to meet critical skills gaps
Key Challenges	<ul style="list-style-type: none"> There is limited awareness of renewable energy career opportunities and education, training and employment pathways in school and local communities. The Electricity Infrastructure Jobs Advocate observed in his first report a 'general lack of understanding of the career opportunities in the renewable energy sector', including a lack of community awareness in the REZs.² He observed this is partly because the emerging sector does not yet function as a unified industry, and long-term pathways within the sector are not yet clear. The Clean Energy Council also observed: 'As a relatively new sector, the renewable energy industry is still a mystery to many Australians'.³ It is not clear what the jobs are, where they are, what skills and attributes they require, and what pathways lead to them. 	<ul style="list-style-type: none"> Very few, if any, qualifications needed by the renewable energy sector are being delivered in the REZs where most renewable energy infrastructure will be located. Training providers may be disincentivised from delivering the training needed by the renewable energy sector, given low student demand dispersed across the state alongside the high costs of training delivery, particularly in the regional NSW where the REZs are located. The government's consultation with training providers suggests VET workforce shortages also constrain their ability to scale up the delivery of training. 	<ul style="list-style-type: none"> The National Centre for Vocational Education and Research (NCVER) found that about four of 10 apprentices commencing construction and electrotechnology trade roles in 2019 in NSW did not complete training.⁴ The fragmented nature of the sector has limited coordination and collaboration between industry, education and training, and community stakeholders to date. The short duration of renewable energy projects may require apprentices to work across different employers and projects to complete training. The roadmap's workforce is projected to fluctuate over time and across different regions. 	<ul style="list-style-type: none"> The national, renewable energy generation and distribution workforces respectively consist of:⁵ <ul style="list-style-type: none"> 20% and 25% women 1% and 2% First Nations people (in comparison, Aboriginal and Torres Strait Islander people make up 3.4% of the NSW population)⁶ 5% and 7% people with long-term health conditions (in comparison, 30.9% of people living in NSW reported having one or more long-term health condition(s))⁷ These cohorts have traditionally been excluded and underutilised by the energy sector. 	<ul style="list-style-type: none"> There are key opportunities for regional workforces in emissions intensive industries to transition to employment in the renewable energy sector. Regions with high coal mining employment include the Hunter (9,400), Lithgow-Mudgee (2,600), Lake Macquarie (1,200), Newcastle (700) and Wollongong (500).⁸ With low unemployment in NSW, particularly in some of the REZs, there will likely be a limited supply of available, local, skilled workers. The renewable energy sector will also likely compete for skilled workers with various other sectors with similar skills needs, such as mining, construction, advanced manufacturing and defence.

Key Existing Programs

Pillars	Awareness	Access	Support	Equity	Mobility
Existing programs	<ul style="list-style-type: none"> • Launch Your Career provides students with careers information through interactive events, and connects them with industry, training and other careers programs. • Careers NSW provides online access to careers information, advice and guidance. • The Regional Industry Education Partnerships (RIEP) connects employers with schools to deliver bespoke opportunities for students to learn about training and employment pathways, develop new skills and networks, and get hands-on experience of local jobs and industries. • The Educational Pathways Program (EPP) supports public high school students to learn about, explore and undertake a range of vocational training and employment pathways, providing job readiness training, careers advice, and wrap around supports. • School Based Apprenticeships and Traineeships (SBATs) provide an opportunity for students in Years 10-11 to commence an apprenticeship or complete a traineeship whilst contributing to their HSC. • The Infrastructure Traineeship provides Year 12 school leavers with employment and VET training in the infrastructure sector. • TAFE NSW's microskill 'Prepare to work in the renewable energy sector' introduces students to the sector. • The Australian Government's myfuture website provides resources to explore career pathways and tools. • The Australian Government has committed \$3.1 million to promote careers in the clean energy sector.⁹ 	<ul style="list-style-type: none"> • The Smart and Skilled program provides subsidised training to eligible students. All apprenticeships and traineeships are fee-free, as are a wide range of priority qualifications in areas of skills need. • The Get Back in the Game initiative funds community organisations to help transition disengaged youth into education, training and employment. • The TAFE NSW Paid to Learn Program pays industry professionals to undertake a 14-week program to support them to transition into teaching in the VET sector. • The NSW Government has committed to establish Advanced Manufacturing Centres of Excellence in Western Sydney, the Hunter and the Illawarra. • The NSW Government has committed \$25 million to establish a Hydrogen Centre of Excellence in Glenwood, in partnership with the Plumbing Industry Climate Action Centre (PICAC), to help address the skills needs of the hydrogen sector. • The NSW Government is scoping a proposal for a Renewable Energy Awareness and Career Training Centre (REACT) in Wellington • The Australian Government is investing \$10m to establish an Energy Futures Skills Centre in the University of Wollongong and \$2.5m to establish a Renewable Energy Training facility at Wollongong TAFE. • The Australian Government has committed \$30 million to support the VET workforce for clean energy.¹⁰ 	<ul style="list-style-type: none"> • Group Training Organisations (GTOs) hire apprentices and trainees, taking on employer responsibilities, and place them host employers. • The 1,000 NSW Public Sector Apprentices and Trainees Program will employ an additional 1,000 apprentices and trainees across government agencies. • The government is investing \$252.2m to employ 1,300 apprentices and trainees in the local government sector. • Essential Energy's Apprenticeship Program provides high quality training and support, with a retention rate of 92% since 2014. • The Australian Government's New Energy Apprenticeship Program provides eligible apprentices with up to \$10,000 and access to mentoring. • The Australian Government's Living Away From Home Allowance (LAFHA) provides weekly payments (up to \$77.17) to eligible apprentices. • The Australian Government's Australian Apprenticeships Support Loans provide up to \$25,643 (for 2024-25) to eligible apprentices to assist with everyday costs. • The Australian Government's Australian Apprenticeship Support Services program provides mentoring for apprentices. • The Australian Government's Priority Hiring Incentive provides eligible employers of apprentices with up to \$5,000 in the first year of an apprenticeship. 	<ul style="list-style-type: none"> • The Infrastructure Skills Legacy Program (ISLP) embeds skills, training and diversity targets in all NSW Government infrastructure projects for key cohorts including women, young people, learning workers, apprentices and trainees and Aboriginal people. • The Barranggirra – Skilling for Employment initiative provides end-to-end support for Aboriginal and Torres Strait Islander students, aiming to improve completion and employment outcomes. • The Elsa Dixon Aboriginal Employment Grant subsidises training and employment opportunities for Aboriginal and Torres Strait Islander workers in NSW Government agencies and local government authorities. • The Women in Construction Industry Innovation Program provides grants to support industry initiatives that encourage the participation and retention of women in the construction industry. • The Girls Can Too program helps female Year 10-11 students explore traditionally male dominated trades such as construction, electrical and welding, connecting them with employers and providing them with entry level skills and work experience, potentially paving the way towards an apprenticeship. • The Australian Government's Disability Australian Apprentice Wage Support (DAAWS) provides weekly payments of \$104.30 to employers who employ apprentices with disability. 	<ul style="list-style-type: none"> • The NSW Skilled Migration Program (subclasses 190 and 491) allows skilled workers whose skills align with the State's needs to work, live and study in NSW. • The Automatic Mutual Recognition (AMR) scheme supports workers in select licensed occupations to work in another state or territory with their home state license. • The Trans-Tasman Mutual Recognition (TTMR) arrangement allows a licensed or registered worker in Australia or New Zealand to receive another registration or license in the other country after they have notified the local registration authority and paid any applicable fees. • The Australian Government supports various visa programs to help employers to address their skills needs, such as the Temporary Skill Shortage Visa (subclass 482) and the Employer Nomination Scheme visa (subclass 186). • The Australian Government has committed, as part of its Migration Strategy, to develop a new Skills in Demand visa – a 4-year temporary skilled worker visa, to bring in the skilled workers Australia needs now and in the future.

Draft Options

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Outcomes	Students are informed about, interested in, and get a taste of renewable energy pathways	Students can access renewable energy pathways where there are renewable energy jobs	Students are supported through renewable energy education, training and employment pathways	Under-represented cohorts have a fair share of renewable energy opportunities	Employers can access skilled workers from other sectors, regions and countries to meet critical skills gaps
Draft Options	<ul style="list-style-type: none"> Deliver a digital marketing campaign to increase awareness of renewable energy opportunities and pathways, particularly in regional NSW (e.g. the 'Regional Gap Year') Develop online careers information, resources and personalised careers guidance, potentially through the <u>Careers NSW website</u> and the <u>Launch your Career</u> program Expand the <u>Regional Industry Education Partnerships (RIEP)</u> program, focusing on the REZs, to partner schools with local renewable energy employers to provide students with industry learning opportunities (e.g. careers expos, trade tasters, work experience) Appoint School Based Apprenticeship and Traineeship (SBAT) Engagement Officers, leveraging the Educational Pathways Program model, to promote, coordinate and support SBATs in renewable energy Develop online resources for school teachers to deliver renewable energy-related curriculum 	<ul style="list-style-type: none"> Provide training providers with additional subsidies to deliver key qualifications needed by the sector and by regional communities Establish a flexible Training Fund to support specialised training solutions, including industry-accredited training Investigate the development of new or upgraded TAFE NSW facilities in or near the REZs for shared use Scale up TAFE NSW's use of Mobile Training Units to deliver training in the REZs Scale up TAFE NSW's delivery of online microskills (short, self-directed courses to develop a specific skill) Establish a VET Workforce Development Fund to support the VET workforce's growth and retention Provide workers who have industry experience with additional incentives to enter the VET workforce 	<ul style="list-style-type: none"> Appoint local skills coordinators, leveraging the <u>ISLP model</u>, to (1) work across REZ projects to promote RE pathways, access funded programs, engage local workforces (including the unemployed) and facilitate tailored training solutions Partner with Essential Energy and others to expand <u>Group Training Organisation (GTO)</u> services in the REZs to increase apprenticeship uptake and completion Partner with industry and training providers to investigate alternative pathways in renewable energy, building on the <u>Tertiary Pathways Project</u> Partner with renewable energy employers to create an online jobs platform to share information on what jobs are needed, when and where, and to link employers with prospective workers 	<ul style="list-style-type: none"> Appoint local skills coordinators, leveraging the <u>ISLP model</u>, to (2) work with employers to increase the representation of young people, Aboriginal people, women and other priority cohorts on renewable energy projects Expand the <u>Barranggirra Skilling for Employment</u> initiative to provide culturally appropriate mentoring for Aboriginal learners and support them through training and into the workforce Provide university scholarships, worker allowances and employment grants to increase the participation and retention of under-represented groups in the sector Expand the <u>Women in Construction Industry Innovation Program</u> to fund industry initiatives to encourage the participation and retention of women in the sector 	<ul style="list-style-type: none"> Re-establish the Trade Pathways for Experienced Workers program to support existing workers to have their skills and experience recognised (Recognised Prior Learning) and undertake any gap training towards a trade qualification Partner with local councils, businesses and community stakeholders to develop regional workforce attraction initiatives Investigate how the <u>Automatic Mutual Recognition (AMR)</u> scheme could better support licensed tradespeople in other states and territories to work in NSW Partner with the Australian Government to adjust skilled migration settings to better meet the needs of the renewable energy sector.

Consultation Questions



1. What are your thoughts on these pillars and actions?



2. How do you see your organisation supporting these actions?



3. Is there anything else the government needs to consider?

You can provide feedback:

- Through the online form or QR code below



<https://forms.office.com/r/KT3LriRBzz>

- By email to renewableenergyskills@det.nsw.edu.au

Consultation closes on 15 October 2024.

References



1. Jobs and Skills Australia (2023) *The Clean Energy Generation: workforce needs for a net zero economy*, JSA website, accessed 8 November 2023.
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3. Clean Energy Council (2022) *Skilling the Energy Transition*, CEC website, accessed 2 May 2024.
4. National Centre for Vocational Education Research (2024) *Australian vocational education and training statistics: completion and attrition rates for apprentices and trainees 2023*, NCVER website, accessed 25 September 2024.
5. Jobs and Skills Australia (2023) *The Clean Energy Generation: workforce needs for a net zero economy*, JSA website, accessed 8 November 2023.
6. Australian Bureau of Statistics (2022) *New South Wales: Aboriginal and Torres Strait Islander population summary*, ABS website, accessed 25 September 2024.
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9. Australian Government (2024) *Skilling the Clean Energy Workforce*, Department of Employment and Workforce Relations website, accessed 25 September 2024.
10. Australian Government (2024) *Skilling the Clean Energy Workforce*, Department of Employment and Workforce Relations website, accessed 25 September 2024.