NINTIONELIMITED

Decarbonisation pathways guide

New South Wales

Acknowledgement

We acknowledge Aboriginal and/or Torres Strait Islander peoples as the Traditional Custodians of our land and its waters. Ninti One Limited and our project partners wish to pay respects to Elders, past and present, and to the youth, for the future. We extend this to all Aboriginal and/or Torres Strait Islander people reading this document.

Use of sensitive terms

The terms ‘Aboriginal and/or Torres Strait Islander’, Aboriginal’, ‘Indigenous’ and ‘First Nations’ may be used interchangeably throughout our resources. Using these terminologies, we seek to acknowledge and honour diversity, shared knowledge and experiences as well as the right of stakeholders to define their own identities.

Appreciation

Ninti One gratefully acknowledges the contribution of our project partners Alinga Energy Consulting, Community Works, Humanitarian and Development Consulting Pty Ltd, Building Indigenous Capability Pty Ltd and consultants Dr Dan Tyson and Alanna Reneman to the First Nations Engagement in the Transition to Net Zero project and the development of this resource.

We sincerely thank the Cultural Safety in the Decarbonisation Transition Reference Committee for their invaluable guidance and support throughout the project.

We also extend our heartfelt thanks to all the people who generously shared their time and perspectives during the consultation process – your voices are at the heart of this work.

This project was funded by the Australian Government Department of Employment and Workplace Relations.

Disclaimer

Artwork story

This artwork is a story that incorporates the project First Nations Engagement in the Transition to Net Zero. It represents the various pathways First Nations people might take to find their feet in a secure workforce.

Each step of the way – from starting out, to becoming successful and eventually guiding the younger generations – is a journey in itself.

Firstly, people will hear about a job and decide if it is right for them. If this is the path they'd like to take, the next step of this journey is getting skilled up and landing the job. Once the job is secured, they will settle in and ultimately grow and thrive, in order to eventually teach new ones coming through.

Each pathway and section of the design has plenty of community symbols. This represents the support of those who are encouraging and helping to build confidence for these First Nations peoples.

About the artist – Kirralee Costelloe

My name is Kirralee Costelloe, and I am a proud Mandandanji / Noonuccal Woman who was born and raised in Rockhampton, Queensland. My art journey started about 7 years ago when I decided to carry on my Elder's legacy of painting and create my own, for my people, for my family and for myself. I thrive when I'm meeting new people in my community and having the opportunities to teach them about my story, while also creating art for them in many different ways.

Contents

Introduction

The Australian Government is working to accelerate the development of clean energy and the skills and capabilities needed to support Australia's transition to net zero. As part of this, increasing participation of First Nations peoples in the decarbonisation workforce has been identified as a priority.

To inform this work, the Department of Employment and Workplace Relations engaged Ninti One Limited to research the opportunities and barriers for First Nations people in accessing training and employment in the decarbonisation workforce. This research also assessed existing cultural safety measures and identified practical opportunities to create safer, more supportive environments for First Nations learners and workers.

Ninti's research involved extensive engagement with First Nations peoples, organisations, employers, training providers and government stakeholders, with more than 100 consultations conducted nationally.

The project findings are designed to inform the development of tools and resources that will help industry, training providers and government better support participation of First Nations people in Australia's future decarbonisation workforce. This guide also supports the objective identified in the Australian Government First Nations Clean Energy Strategy 2024-30 (the Strategy) to grow the clean energy workforce, including the priority actions to:

- Coordinate First Nations clean energy workforce development
- Improve First Nations workforce readiness
- Develop a First Nations clean energy job guide

The Strategy was developed through engagement with more than 1,200 people across Australia, including First Nations peoples, industry, government and non-government organisations.

About this guide

First Nations people have long cared for Country – managing resources, protecting ecosystems and passing down knowledge across generations. Now, as NSW transitions to clean energy, there's an opportunity for mob to lead again – not just by joining the workforce, but by shaping how this sector grows. From rooftop solar in social housing to large-scale wind farms, battery storage and energy efficiency upgrades in schools and council buildings, decarbonisation work is already happening in the places mob live, work and belong.

Across the state, new jobs are opening up in solar, wind, batteries, grid construction, civil works, engineering and environmental management. Some are major infrastructure projects like EnergyConnect, HumeLink and the Central-West Orana Renewable Energy Zone. Others are smaller, community-based and closer to home – offering practical, well-paid work that reflects the strengths, values and goals of mob.

This document gives details about 9 different jobs that have important roles to play in decarbonising industries. The jobs are electrician, wind turbine technician, solar installer, battery storage technician, grid construction worker, civil construction worker, electrical engineer, environmental engineer and energy efficiency consultant.

The guide will help you explore these roles and see where you fit. For each job, you'll find:

1. a clear explanation of what the role involves
2. a description of why it matters for mob – including how it supports community, protects Country and creates opportunities to walk between 2 worlds
3. out what skills and training are needed, and how to get them
4. the requirements for site readiness, licensing or registration
5. what support is available – including mob-led programs and services
6. where the jobs are across NSW
7. step-by-step guidance to help you take the next step.

This isn't just about joining the clean energy transition – it's about making sure our mob are at the centre of it. Leading, not following. Building futures that are strong, grounded and ours.

Electrician

What's the job?

Electricians install, maintain and repair the wiring that powers clean energy projects – from rooftop solar and battery systems to large-scale wind and solar farms. In NSW, electricians are in high demand as the state builds Renewable Energy Zones (REZs), upgrades the electricity grid and replaces coal-fired power. This is skilled, hands-on work with clear steps to get qualified, strong job security and good pay. For mob, it's a trade you can carry with you – on Country, in the city, or across regions – with real opportunities to grow over time.

Why it matters for mob

This is one of the most direct and accessible ways mob can step into the clean energy sector. It offers hands-on work, solid wages and a respected trade that's in high demand across NSW, especially in renewable projects being built on Country. For many mob, it's a first step into long-term, skilled work that doesn't require moving away or starting with a degree. You're not just working on someone else's job; you're becoming qualified, employed and in control of your own path in an industry that's only getting bigger.

This job suits you if you …

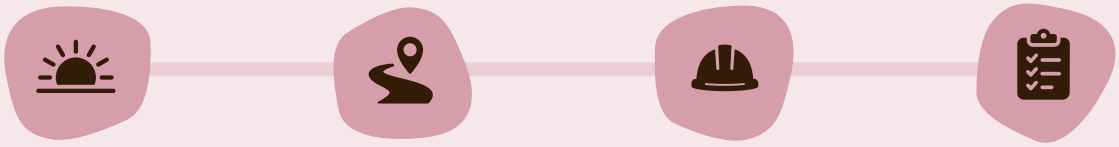
- like working with your hands and solving problems
- are focused and careful – safety matters
- enjoy being outdoors or working in different environments
- are up for a challenge and willing to learn new things
- have or can get a driver's licence (needed to travel between sites and onsite).

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- CPR and low voltage rescue training – updated yearly
- Working at heights / first aid training – often required by employers
- Solar Accreditation Australia (SAA) accreditation – required to install solar or battery systems.

A day on the tools

You'll be indoors and outdoors, sometimes up ladders, on rooftops or in tight spaces. Strong safety habits and team communication are key.



Start early
Safety briefing, gear check and plan for the day.

Head to site
Could be a housing upgrade, battery install or solar job.

Get to work
Run cables, install systems, check circuits or troubleshoot faults.

Wrap up
Test the system, make it safe, record the job and pack down.

Pathway (training and qualifications)

Certificate II in Electrotechnology (career start)

A 6-month pre-apprenticeship at TAFE – learn the basics and see if it's for you.

Certificate III in Electrotechnology Electrician

A 4-year paid apprenticeship mixing hands-on site work and TAFE study (usually delivered in person, often weekly or in blocks – some providers offer regional delivery or travel support if needed). You'll learn how to wire homes, fix faults and work on clean energy sites.

Electrician's License

Once you finish your apprenticeship, you apply to NSW Fair Trading to get licensed. This lets you work on your own and take on bigger jobs.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Lead hand or supervisor
Run jobs and guide apprentices.

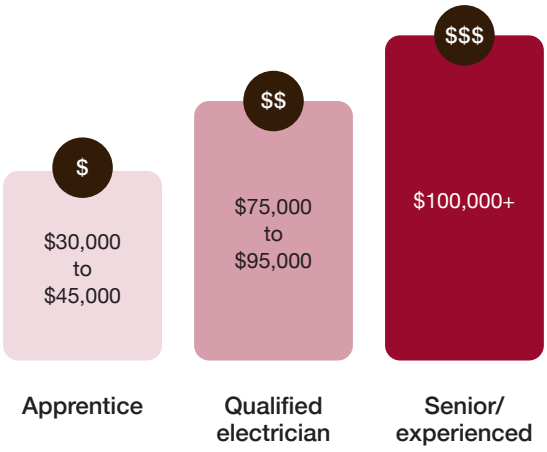
Solar or battery tech
Specialise in clean energy systems.

Inspector or compliance officer
Check safety and quality.

Start your own business
Become your own boss.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Sydney Metro	Building retrofits, solar and battery upgrades, EV chargers
2. Central-West Orana	Large solar and wind projects (Dubbo, Wellington)
3. Hunter Valley	Transition from coal to renewables (e.g. Liddell battery)
4. New England	Massive clean energy zone – wind, solar, battery
5. Southwest NSW	Remote solar builds and FIFO/DIDO roles (Balranald, Hay)

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Get your driver's licence – most jobs require it
2. Get your White Card – basic safety training before you go onsite
3. Do a Cert II at TAFE – gives you the basic knowledge
4. Apply for a paid apprenticeship – 4 years on the job + study
5. Finish your Cert III and apply for your electrician's licence
6. Do extra training (solar, batteries, first aid, etc.) to open more doors
7. Look for jobs – ask TAFE, check job boards or yarn with AES
8. Gain experience – work with a good crew and learn the ropes
9. Grow your career – lead teams, specialise or start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- NSW Apprenticeship Finder Tool – search local jobs or training providers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Wind turbine technician (electrician)

What's the job?

Wind turbine technicians install and maintain the electrical systems inside wind turbines – including the wiring, switchboards and controls that help generate and move power. In NSW, massive wind zones like New England and Central-West Orana are creating strong demand for electricians trained in wind. You'll work outdoors, often at heights, in crews that travel together across Country. This job suits people who want to specialise in renewables, stay active and work on the projects powering the clean energy future.

Why it matters for mob

This job puts mob in a specialised trade at the heart of the clean energy boom. You'll be working on turbines in areas where many communities already live and will be part of teams building something that lasts. Unlike many short-term jobs, this role leads to long-term work with strong pay, respect and a chance to keep learning. It's a real opportunity for mob to be seen, valued and employed in high-demand, future-focused work that's shaping how energy is made across Country.

This job suits you if you …

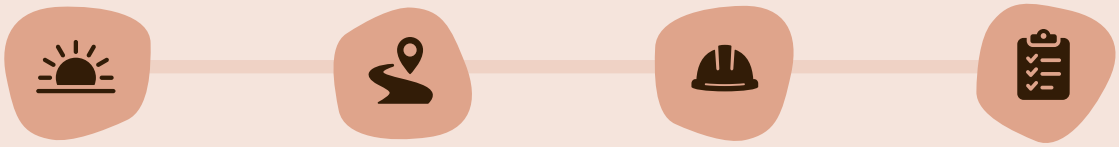
- are comfortable working at heights and in confined spaces
- have strong problem-solving skills and attention to detail
- are willing to travel and work in remote locations
- are physically fit and have good stamina
- have a commitment to safety and continuous learning.

Add-ons to get site-ready

- Global Wind Organisation (GWO) certification – essential for wind turbine technicians. Find a GWO provider near you.
- High-risk work licence – may be required for certain tasks
- White Card (construction safety training) – required before going onsite
- CPR and low voltage rescue training – updated yearly
- Working at heights / first aid training – often required by employers
- Solar Accreditation Australia (SAA) accreditation – required to install solar or battery systems.

A day on the tools

Work often involves climbing turbines, working at heights and being exposed to various weather conditions. Strong safety habits and team communication are essential.



Start early
Safety briefing, gear check and plan for the day.

Head to site
Could be building a wind farm or maintenance on existing turbines, often in a regional area.

Get to work
Inspect electrical systems, perform maintenance, troubleshoot faults or assist in turbine installations.

Wrap up
Test systems, ensure safety protocols are met, document work and pack down.

Pathway (training and qualifications)

Certificate II in Electrotechnology (career start)

A 6-month pre-apprenticeship at TAFE – learn the basics and see if it's for you.

Certificate III in Electrotechnology Electrician

A 4-year paid apprenticeship mixing hands-on site work and TAFE study (usually delivered in person, often weekly or in blocks – some providers offer regional delivery or travel support if needed). You'll learn how to wire homes, fix faults and work on clean energy sites.

Electrician's License

Once you finish your apprenticeship, you apply to NSW Fair Trading to get licensed. This lets you work on your own and take on bigger jobs.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Lead technician or supervisor
Oversee turbine maintenance teams.

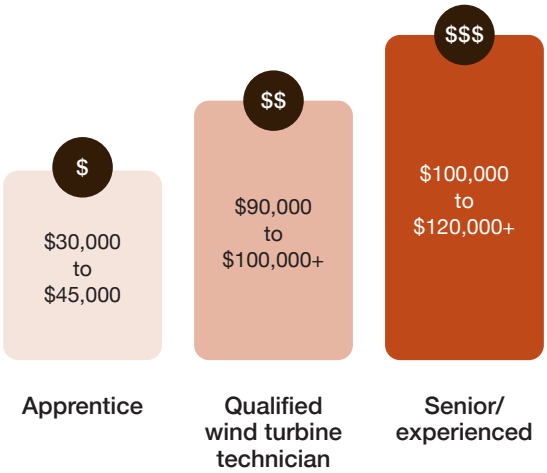
Blade repair specialist
Focus on turbine blade maintenance and repair.

Commissioning technician
Specialise in bringing new turbines online.

Start your own business
Become your own boss in the renewable sector.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Central-West Orana	Major wind farm projects and maintenance roles
2. New England	Expansion of wind energy projects and new installations
3. Riverina	Ongoing maintenance and development of wind farms
4. Hunter Region	Transitioning energy sector with emerging wind projects

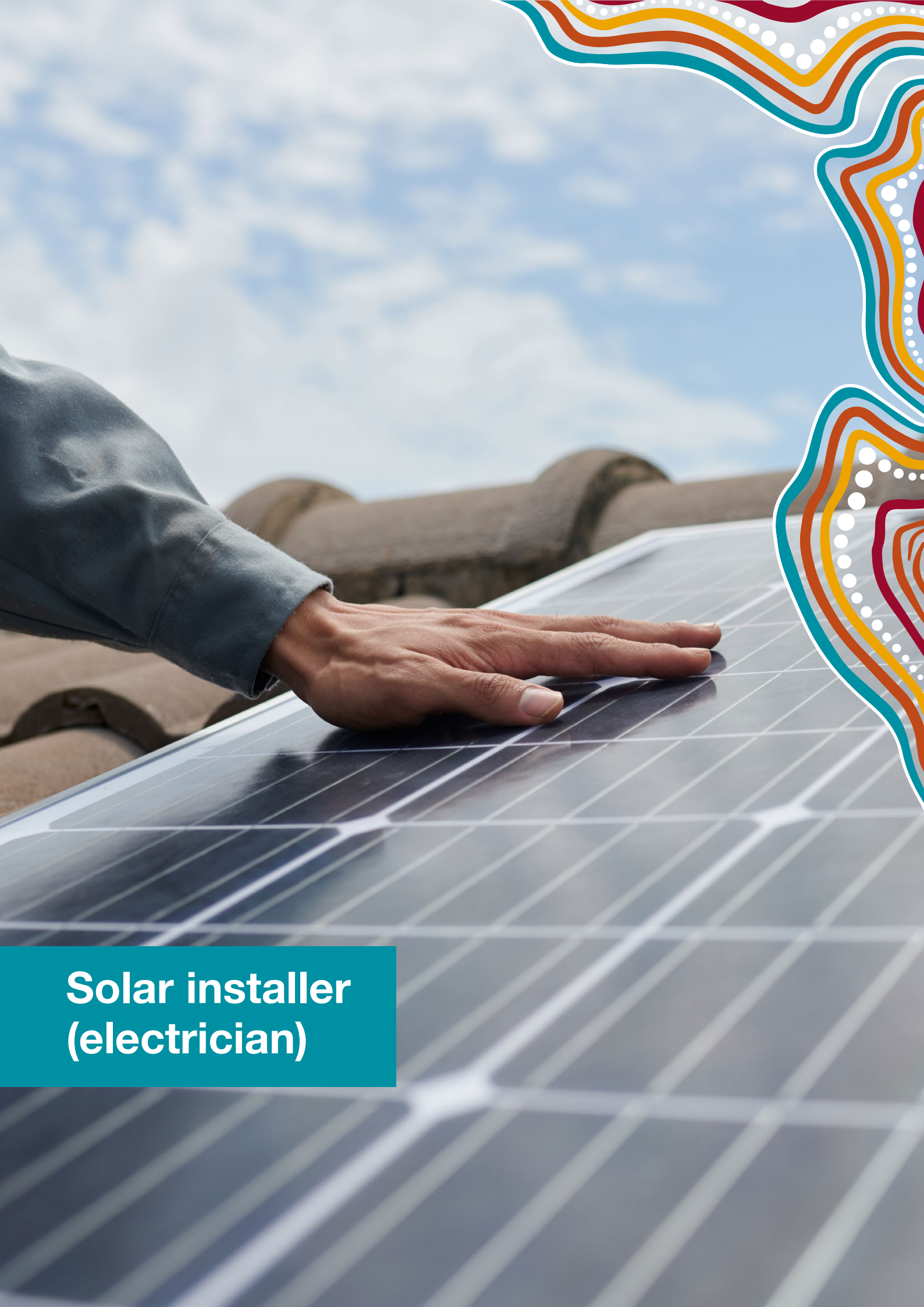
Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Get your driver's licence – most jobs require it
2. Get your White Card – basic safety training before you go onsite
3. Do a Cert II at TAFE – gives you the basic knowledge
4. Apply for a paid apprenticeship – 4 years on the job + study
5. Finish your Cert III and apply for your electrician's licence
6. Obtain GWO certification and other relevant training
7. Look for jobs – ask TAFE, check job boards, or yarn with AES
8. Gain experience – work with a good crew and learn the ropes
9. Grow your career – lead teams, specialise or start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- NSW Apprenticeship Finder Tool – search local jobs or training providers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel



Solar installer (electrician)

What's the job?

Solar electricians install and connect rooftop solar systems and commercial-scale arrays for homes, businesses, schools and solar farms. You'll make sure the panels, inverters and wiring are installed safely and meet electrical standards. In NSW, solar projects are booming across the state, especially in regional towns and on Country. It's solid work with strong demand, good pay and a clear role in helping communities cut energy costs and reduce emissions.

Why it matters for mob

Solar is one area where mob are already leading – running crews, training others and working on community projects that lower bills and boost energy independence. This role gives you a clear path into that space – as an electrician with the right skills to work across homes, schools and large solar farms. For mob in remote or regional areas, it offers steady work close to home, with growing potential to step into leadership or even start your own business.

This job suits you if you …

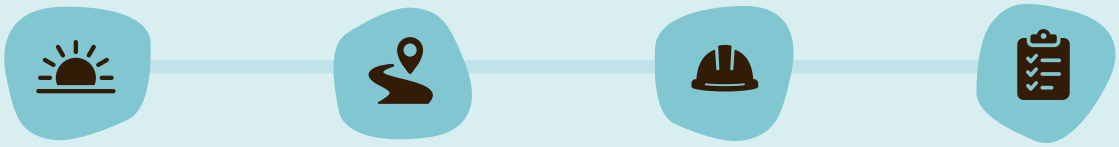
- are a qualified electrician looking to move into renewables
- enjoy working outdoors and at heights
- like hands-on work and solving problems
- are keen to help communities switch to clean energy.

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- CPR and low voltage rescue training – updated yearly
- Working at heights / first aid training – often required by employers
- Solar Accreditation Australia (SAA) accreditation – required to install solar systems eligible for government rebates.

A day on the tools

You'll often work on rooftops or in the sun, so safety and teamwork are key.



Start early
Check gear, review the job plan and load up the van.

Head to site
Could be a house, school, business or solar farm.

Get to work
Install panels, connect the inverter, run cables and test the system.

Wrap up
Make sure everything's working safely, explain the system to the customer and pack down.

Pathway (training and qualifications)

Certificate II in Electrotechnology (career start)

A 6-month pre-apprenticeship at TAFE – learn the basics and see if it's for you.

Certificate III in Electrotechnology Electrician

A 4-year paid apprenticeship mixing hands-on site work and TAFE study (usually delivered in person, often weekly or in blocks – some providers offer regional delivery or travel support if needed). You'll learn how to wire homes, fix faults and work on clean energy sites.

Electrician's License

Once you finish your apprenticeship, you apply to NSW Fair Trading to get licensed. This lets you work on your own and take on bigger jobs.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Lead installer or supervisor
Manage installation teams.

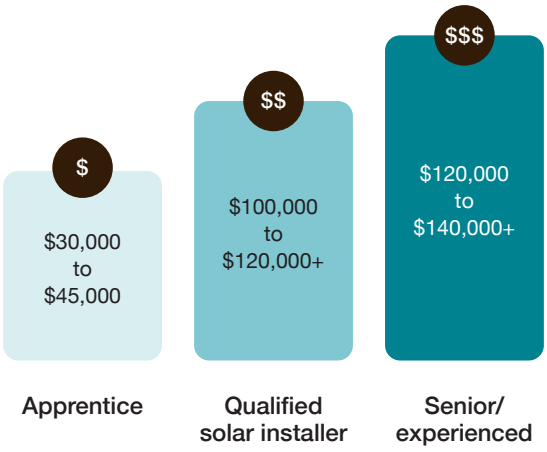
System designer
Specialise in designing solar PV systems.

Energy consultant
Advise clients on energy solutions.

Business owner
Start your own solar installation company.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Sydney Metro	High demand for residential and commercial installations
2. Central Coast	Growing market with new housing developments
3. Hunter Region	Expansion in both residential and industrial solar projects
4. Northern Rivers	Strong community interest in sustainable energy solutions
5. Riverina	Agricultural sector adopting solar for energy needs

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Get your driver's licence – most jobs require it
2. Get your White Card – basic safety training before you go onsite
3. Do a Cert II at TAFE – gives you the basic knowledge
4. Apply for a paid apprenticeship – 4 years on the job + study
5. Finish your Cert III and apply for your electrician's licence
6. Complete SAA Accreditation – required for solar installation work
7. Look for jobs – ask TAFE, check job boards or yarn with AES
8. Gain experience – work with a good crew and learn the ropes
9. Grow your career – lead teams, specialise or start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- NSW Apprenticeship Finder Tool – search local jobs or training providers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Battery storage technician (electrician)

What's the job?

Battery technicians install and maintain systems that store power like household batteries, community-scale storage or big batteries connected to the grid. These systems help communities manage energy use, store excess solar and keep power going during outages. In NSW, battery storage is growing fast, especially in remote and regional areas supporting renewable energy zones. This is a specialised area for electricians who want to be part of the clean energy transition building smarter, more reliable systems that work for mob and Country.

Why it matters for mob

Battery storage is about more than technology; it's about control. This role helps communities manage their own energy, reduce reliance on the grid and keep power flowing in remote areas. For mob, it's a skilled, respected job that plays a key part in energy independence. With demand rising fast for battery systems across NSW, trained technicians are needed to install and maintain them especially in places where mob already live. It's steady, future-proof work that builds both technical knowledge and community impact.

This job suits you if you …

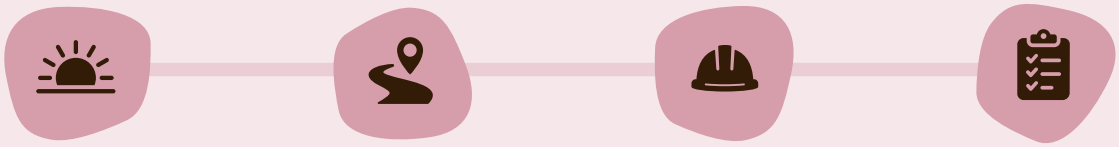
- are a qualified electrician looking to specialise in renewable energy
- enjoy technical, hands-on work
- are interested in sustainable practices and community development
- want a career with strong job prospects in a growing industry.

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- CPR and low voltage rescue training – updated yearly
- Working at heights / first aid training – often required by employers
- Grid-Connected Battery Storage Systems Designer Installer Skill Set – offered by various RTOs; covers design and installation of battery systems.
- Solar Accreditation Australia (SAA) accreditation – required to install solar systems eligible for government rebates.

A day on the tools

Work environments vary and safety is paramount, especially when dealing with electrical systems and heavy equipment.



Start early
Check tools, safety gear and job plans.

Head to site
Which could be a home, business or large-scale facility.

Get to work
Install battery units, connect them to existing systems and ensure safety standards are met.

Wrap up
Make sure the system works correctly and efficiently, explain how to use and maintain the system to the customer.

Pathway (training and qualifications)

Certificate II in Electrotechnology (career start)

A 6-month pre-apprenticeship at TAFE – learn the basics and see if it's for you.

Certificate III in Electrotechnology Electrician

A 4-year paid apprenticeship mixing hands-on site work and TAFE study (usually delivered in person, often weekly or in blocks – some providers offer regional delivery or travel support if needed). You'll learn how to wire homes, fix faults and work on clean energy sites.

Electrician's License

Once you finish your apprenticeship, you apply to NSW Fair Trading to get licensed. This lets you work on your own and take on bigger jobs.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Lead technician
Supervise jobs and junior techs onsite.

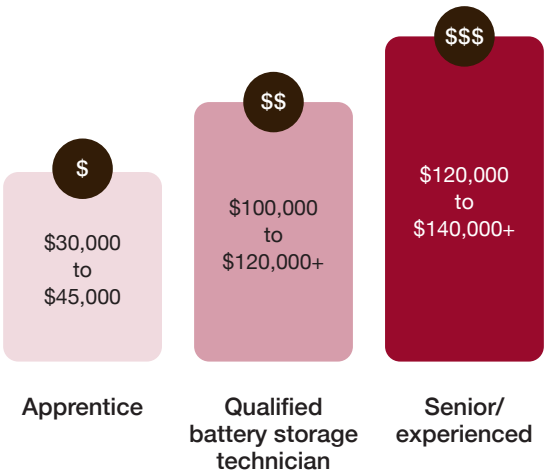
System designer
Plan and design battery setups for homes or businesses.

Energy consultant
Give advice on energy use, storage and savings.

Business owner
Run your own battery installation or service business.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Sydney Metro	High demand for residential and commercial installations
2. Newcastle	Growing market with new housing developments
3. Wollongong	Expansion in both residential and industrial battery projects
4. Dubbo	Strong community interest in sustainable energy solutions
5. Wagga Wagga	Agricultural sector adopting battery storage for energy needs

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Get your driver's licence – most jobs require it
2. Get your White Card – basic safety training before you go onsite
3. Do a Cert II at TAFE – gives you the basics
4. Apply for a paid apprenticeship – 4 years on the job + study
5. Finish your Cert III and apply for your electrician's licence
6. Complete the Grid-Connected Battery Storage Systems Designer Installer Skill Set
7. Obtain SAA accreditation – necessary for battery installation work
8. Look for jobs – ask TAFE, check job boards or yarn with AES
9. Gain experience – work with a good crew and learn the ropes
10. Grow your career – lead teams, specialise or start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- NSW Apprenticeship Finder Tool – search local jobs or training providers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Grid construction workers (transmission lineworkers)

What's the job?

Grid construction workers build and maintain the high-voltage powerlines that move clean energy from where it's made – like solar and wind farms – to where it's used. In NSW, major projects like EnergyConnect and HumeLink are expanding the electricity network to support renewables. You'll work in teams to install towers, string wires, and keep everything safe and working. It's outdoor, physical work that connects power to place and offers long-term jobs in regional areas where mob already live.

Why it matters for mob

These are not just infrastructure jobs – they're nation-building jobs. NSW is overhauling its electricity grid to carry clean energy across vast distances, and that means thousands of new roles in regional and remote areas. For mob, this is a pathway into reliable, well-paid work that doesn't require a degree and puts you at the centre of the state's biggest energy projects. Whether you stay on the tools or move into leadership, it's a solid career built on teamwork, pride and contribution.

This job suits you if you …

- enjoys hands-on, physical work
- are comfortable working at heights and outdoors
- can follow safety procedures and work in a team
- are willing to travel and work in different locations
- have or can get a driver's licence (often needed for access to site).

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- First aid training – often required before starting
- Working at heights / elevated work platform – depends on the site.

A day on the tools

Work is usually outdoors in all weather. It involves working at heights, using safety gear and being physically active. Crews rely on each other, so communication and teamwork are key.

Start early
Prepare gear, check safety systems and plan the day's tasks with your crew.

Head to site
Could be a remote tower install, a grid connection upgrade or ongoing maintenance.

Get to work
Climb and build, install poles and wires, lift and bolt components and follow safety procedures.

Wrap up
Log progress, debrief with the crew and check site safety before heading out.

Pathway (training and qualifications)

Certificate II in Transmission Line Construction

A 6-month course introducing you to the basics of transmission line work, including safety and equipment use.

Certificate III in ESI – Transmission Overhead

A 4-year paid apprenticeship combining on-the-job training with TAFE study (usually delivered in person, often weekly or in blocks – some providers offer regional delivery or travel support if needed). You'll learn how to construct and maintain high-voltage transmission lines.

No trade licence required; however, additional certifications may be needed depending on your role.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Transmission lineworker
Build and maintain high-voltage powerlines.

Live lineworker
Specialise in working on live (energised) lines.

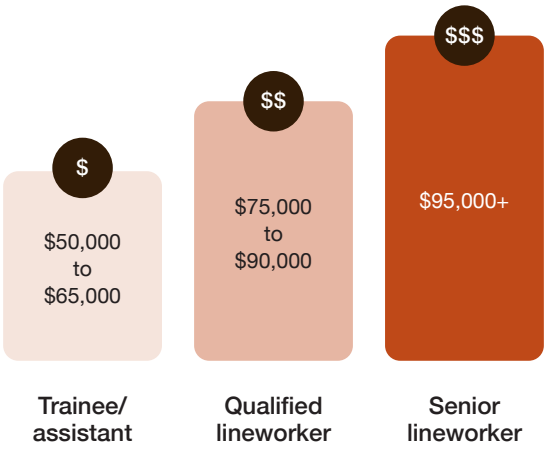
Team leader or supervisor
Manage crews and oversee projects.

Trainer or assessor
Teach and assess new apprentices.

Project manager
Plan and coordinate large-scale transmission projects.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Hunter Region	Hunter Transmission Project – building new 500 kV lines to connect renewable energy zones
2. Riverina	EnergyConnect – constructing a 900 km interconnector between SA and NSW
3. Central Tablelands	HumeLink – upgrading transmission to support Snowy 2.0 and renewable energy integration

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Get your driver's licence – many sites are regional
2. Get your White Card – basic safety training
3. Try a Cert II in Transmission Line Construction – a good way to test the waters
4. Apply for a paid apprenticeship – through local TAFE, jobs boards or mob-led programs
5. Complete your Cert III and build on-the-job experience
6. Add safety tickets (like first aid, working at heights) to expand options
7. Apply for lineworker roles – and ask if support is available for mob
8. Grow your skills – move into specialist or leadership roles over time
9. Grow your career – lead teams, specialise or start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- NSW Apprenticeship Finder Tool – search local jobs or training providers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Civil construction worker

What's the job?

Civil construction workers build the roads, pads, trenches and foundations needed to get clean energy projects off the ground. That includes preparing land for solar farms, battery sites, transmission towers and wind turbine bases. In NSW, thousands of civil roles are opening up in Renewable Energy Zones (REZs), especially across regional and remote areas. It's team-based, physical work and a good entry point into energy and infrastructure jobs with plenty of training and pathways to grow.

Why it matters for mob

Civil construction is where many clean energy projects begin, and that makes it one of the most immediate entry points for mob wanting to get started. With big solar, wind and battery projects ramping up across NSW, demand is high for people who can do the groundwork. It's physical, practical work that pays well and opens doors to options such as staying in civil, moving into other trades or growing your own business. For mob in rural and regional areas, it's a real job close to home, not just a one-off contract.

This job suits you if you …

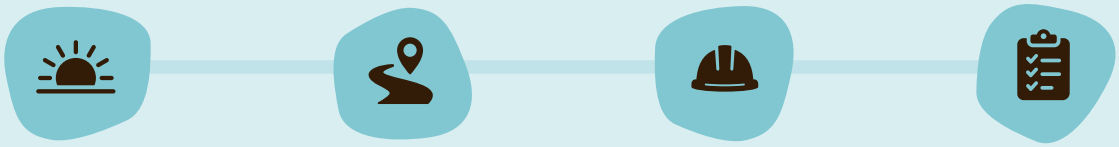
- enjoy hands-on, physical work
- are comfortable working at heights and outdoors
- can follow safety procedures and work in a team
- are willing to travel and work in different locations
- have or can get a driver's licence (often needed for access to site).

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- First aid – often required before starting
- Working at heights / elevated work platform – depends on the site.

A day on the tools

Work is outdoors and physical. You might be using excavators, rollers or hand tools. Some jobs are short-term, others run for months or years.



Start early
Check tools, safety gear and site plans with your crew.

Head to site
Could be at a plant, pipe-laying or constructing roads on site.

Get to work
Operate machinery, dig trenches, pour concrete or build access roads; follow procedures, work as a team, and keep the site clean and secure.

Wrap up
Log progress, pack down equipment and prep for the next day.

Pathway (training and qualifications)

Certificate II in Civil Construction

A 3–6-month course covering basic skills like using tools, reading plans, and site safety. Good for testing the waters or starting in labouring or support roles.

Certificate III (trade-level qualification)

Certificate III in Civil Construction – 2–3-year traineeship. Focuses on plant operations, pipe-laying or road construction. Does not require a licence but is a recognised trade pathway for civil works.

Certificate III in Carpentry or Certificate III in Concreting – 3–4-year paid apprenticeship. Requires a licence to work independently in NSW. Includes formwork, structural builds and large-scale concreting work.

Licensing

Civil construction roles (e.g. plant operations, road works): no trade licence required, but you may need high-risk work tickets (e.g. excavator, skid steer, elevated work platform, dogging)

Carpentry or concreting roles: A licence from NSW Fair Trading is required once you've completed your apprenticeship and gained sufficient experience.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Civil construction worker
Build the foundations of infrastructure projects.

Plant operator
Specialise in operating heavy machinery.

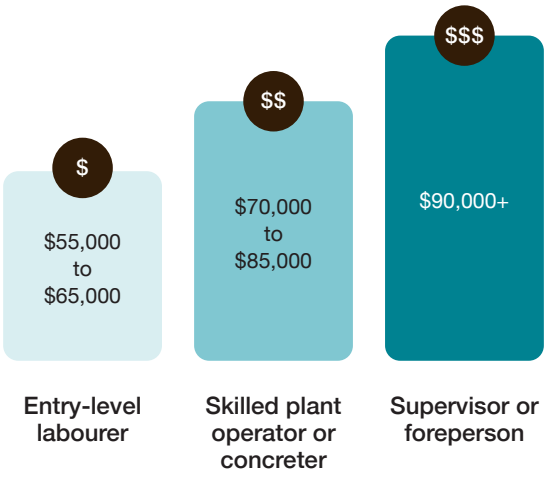
Site supervisor
Lead teams and manage construction sites.

Project manager
Oversee large-scale construction projects.

Business owner
Start your own construction or contracting business.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Central-West Orana	Construction of Australia's first REZ, supporting around 5,000 jobs at peak
2. Hunter Region	Offshore wind projects near Port Stephens and transition from coal-fired power stations
3. New England	Development of the largest planned REZ in NSW by capacity (8 GW)

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

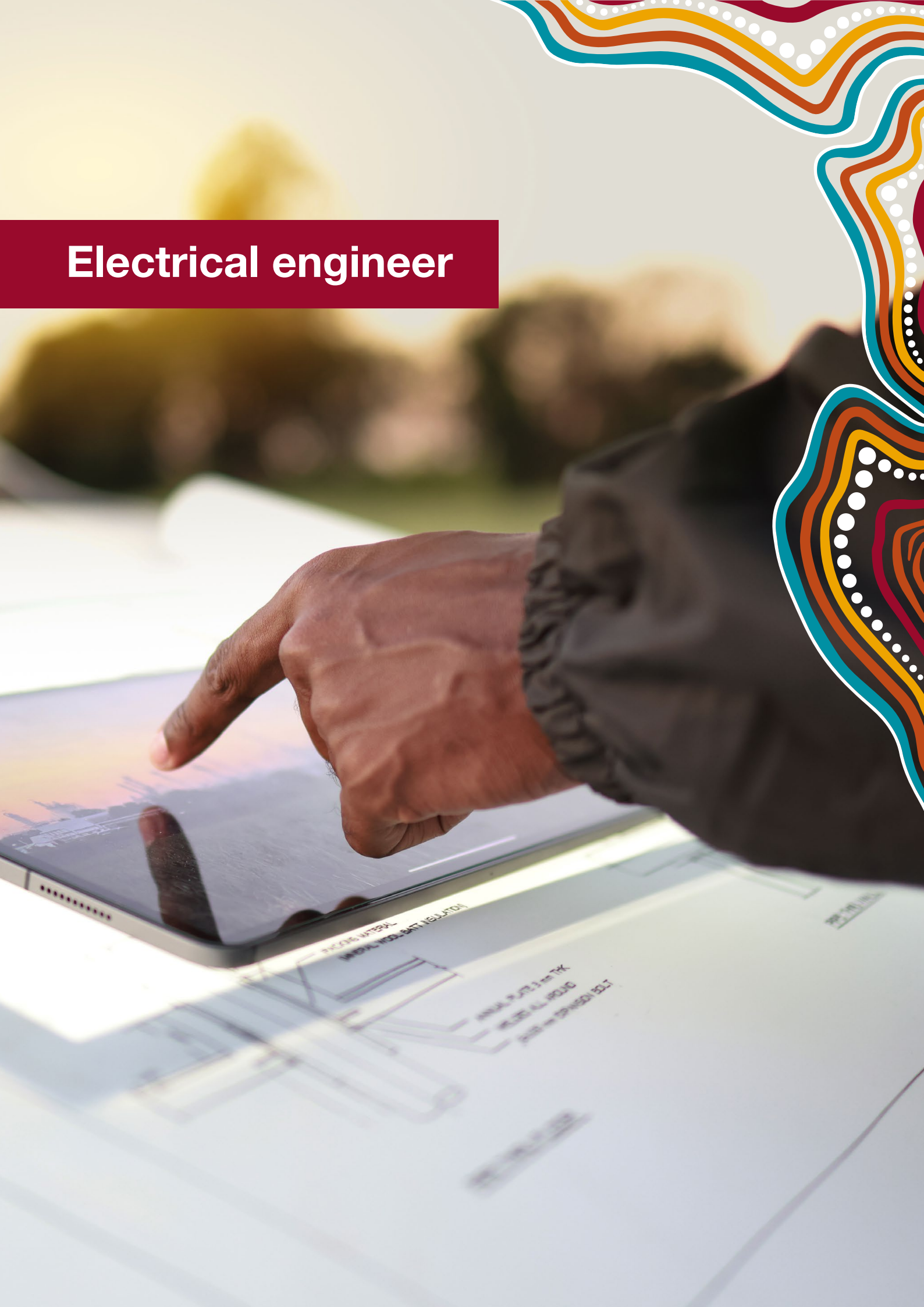
How to get started (step-by-step)

1. Get your driver's licence – needed to travel to and from sites (especially in regional NT)
2. Get your White Card – complete construction safety training before stepping onsite
3. Do a Certificate II in Civil Construction – get hands-on with tools, safety and basic site work
4. Apply for a paid traineeship or apprenticeship – this could be in civil construction, carpentry or concreting, depending on what you want to do
5. Finish your Certificate III – complete your trade or traineeship (2–4 years) while working onsite and studying at TAFE
6. Check if you need a licence – carpenters and concreters need a licence to work independently; civil plant operators don't, but may need extra tickets
7. Get job-ready – stack safety tickets like traffic control, working at heights or first aid, depending on the site
8. Look for work – check job boards, talk to TAFE, connect with AES or apply to contractors on clean energy builds
9. Build your experience – learn from your crew, try different tasks and find your strengths
10. Grow your career – do extra training, lead teams or even start your own business

Need help getting there?

- Aboriginal Employment Strategy (AES) – helps mob get apprenticeships and support through the trade
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE NSW Indigenous Student Support – tutoring, mentoring and wraparound support
- EnergyCo NSW – opportunities in REZ projects and support for local workers
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Electrical engineer



What's the job?

Electrical engineers design and manage the systems that generate, store and move electricity, including grid infrastructure as well as wind, solar and battery storage systems. In NSW, engineers are central to the transition away from fossil fuels, helping connect renewables to the grid, improve reliability and reduce emissions. Some roles are hands-on and based onsite, while others focus on design, modelling and planning. For mob who enjoy systems thinking, problem solving and leadership, this is a strong pathway with growing opportunities.

Why it matters for mob

The clean energy transition needs systems designed to work for Country, not just for industry – and mob are best placed to help lead that change. As an electrical engineer, you will shape how energy is shared and how it fits with the land it crosses. This role gives mob the technical standing to embed First Nations thinking into every wire and flow of energy. It's a chance to build systems that reflect your values, support your community and show the next generation what leadership looks like in the energy space.

This job suits you if you …

- are good at maths and science – good with systems, numbers or logic
- enjoy solving problems and thinking through how things work
- are comfortable using computers and digital tools
- want to work indoors and outdoors, in teams or solo
- can stay organised and manage competing deadlines.

Add-ons to get site-ready

- White Card (construction safety training) – required before going onsite
- First aid – often required before starting
- Working at heights / elevated work platform – depends on the site.

A day on the tools

Start early
Check-in, review design plans, safety briefings or team updates.

Head to work
You'll split time between the office and onsite; some jobs are hands-on, others are more about planning and design.

Get to work
Design or problem-solve; work on a solar grid layout, battery connection or fixing a system fault; visit site or test systems and use tools or software to test equipment or supervise installations; collaborate with electricians, technicians, managers or Traditional Owners to find the best solutions.

Wrap up
Finalise documents, write reports or prepare for the next stage of the project.

Pathway (training and qualifications)

Main pathway – university degree

Finish Year 12 (not essential, but it helps): take general maths, English and preferably physics or engineering studies.

Bachelor of Engineering (Electrical or Electrical & Electronic)

A 4-year university degree (some courses are combined with other majors like Renewable Energy or Telecommunications). Some universities also offer enabling programs or diplomas if you don't meet standard entry requirements.

Graduate program or entry-level job

Most mob start out in graduate engineering programs – working while learning on the job. You'll keep building experience under supervision before taking on bigger projects.

Chartered/registered engineer (CPEng, NER or RPEQ)

Apply to Engineers Australia if you want to become chartered (CPEng) or register on the National Engineering Register – this is not required to start but can support leadership or regulatory roles.

Alternate pathway – TAFE to university or technician training

Start with a Diploma of Electrical Engineering. These can lead to university later or to technician roles working alongside engineers.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Design engineer
Plan new energy systems, tools or equipment.

Project engineer
Run onsite builds and manage contractors.

Electrical safety officer
Make sure worksites follow safety rules.

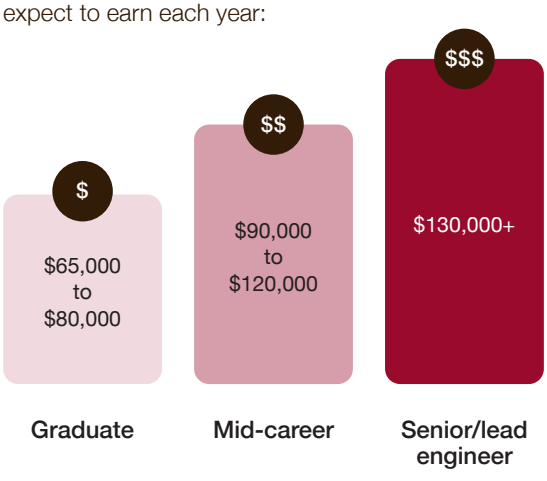
Control systems engineer
Work on smart grids, automationor robotics.

Energy systems engineer
Plan how renewables connect to the grid.

Manager or director
Lead teams, mentor others, shape strategy.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Sydney Metro	Battery storage, EV charging networks, energy efficiency retrofits
2. Central-West Orana	Solar and wind farms – including battery and transmission integration
3. Hunter Valley	Grid upgrades, coal transition, renewable project design
4. New England	Engineering roles across energy planning, modelling and rollout
5. Regional NSW	Infrastructure work tied to supergrid expansion and local renewables

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Finish Year 12 – ideally with maths, English and science subjects
2. Apply for a Bachelor of Electrical Engineering
3. Apply for scholarships or university access programs if needed
4. Start university – join mob support programs and stay connected
5. Apply for internships through CareerTrackers or university partners
6. Finish your degree and apply for a graduate job
7. Keep learning on the job – get mentoring and grow your skills
8. Work towards becoming a senior engineer or project leader
9. Give back – mentor others, share your story, lead change

Need help getting there?

- Aurora Foundation – university access programs and mentoring
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE NSW – Trusted Training and Career Pathways – enabling programs, short courses and tutoring pathways into university
- TAFE NSW Indigenous Centres – tutoring, cultural safety and wellbeing support
- University Indigenous Centres – tutoring, cultural safety and wellbeing support
- UNSW Engineering Indigenous Preparatory Program – pathway into First Nations–led engineering
- National Indigenous STEM Professional Network – mentoring, professional networking and connection to career pathway opportunities
- Engineers Australia Indigenous Chapter – networking and support from mob in the field

Environmental engineer

What's the job?

Environmental engineers protect Country during energy development. You might assess the impact of a solar or wind farm, plan erosion controls, help with mine site rehabilitation or work on water management. In NSW, clean energy projects must meet environmental standards, and skilled workers are needed to ensure projects reduce harm and respect Country. This is a role that combines science, systems thinking and 2-way knowledge working alongside communities, Traditional Owners and government to ensure energy projects are done right.

Why it matters for mob

Environmental engineers sit in a powerful position: between science and Country, between government and community, between what is and what could be. For mob, this is more than a job. It's a way to walk in 2 worlds with strength. You'll have the tools to assess impacts, shape decisions and guide how development happens not just after the fact, but right from the start. In the decarbonisation space, where new projects are being rolled out on Country at speed, your voice is needed to slow things down, ask the right questions and make sure care comes before construction. This is how mob protect what matters: not just by resisting change, but by redesigning it.

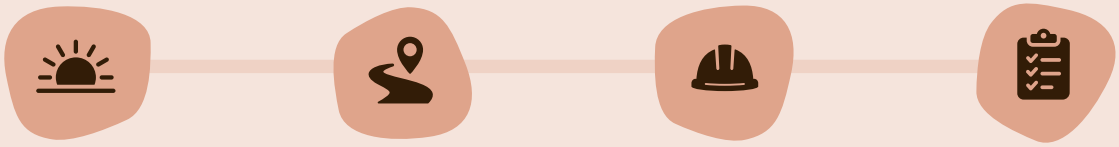
This job suits you if you …

- are interested in science, nature and systems thinking
- are committed to protecting land, water and community
- communicate well and can work with mob, scientists and industry
- have strong values and a problem-solving mindset
- are keen to work outdoors and in team environments.

Add-ons to get site-ready

- White Card – required for construction sites
- First aid – often needed for field work
- Driver's licence – important for travel to regional or remote sites.

A day on the tools



Start early
Plan and review project goals, maps and environmental reports.

Head to work
You might be assessing soil, monitoring water or meeting with Traditional Owners.

Get to work
Model solutions, design systems or review risks.

Wrap up
Write up findings, prepare reports and designs, brief other project teams, provide advice.

Pathway (training and qualifications)

Main pathway – university degree

Finish high school: Aim for subjects like general maths, English and (if you can) physics, chemistry or environmental science.

Bachelor of Engineering (Environmental)

A 4–5-year university degree, sometimes combined with Civil or Chemical Engineering. You'll learn hydrology, pollution control, impact assessment, design, environmental law, and more.

Chartered/registered engineer (CPEng, NER or RPEQ)

You don't need to register in NSW, but professional registration may be required for future work in Queensland or Victoria or for senior roles.

Alternate pathway – TAFE to university or technician training

Start with a Diploma of Environmental Management or Engineering Drafting. These can lead to university later or to environmental technician roles working alongside engineers.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Site environmental adviser
Monitor projects on the ground.

Senior engineer
Lead assessments or impact studies.

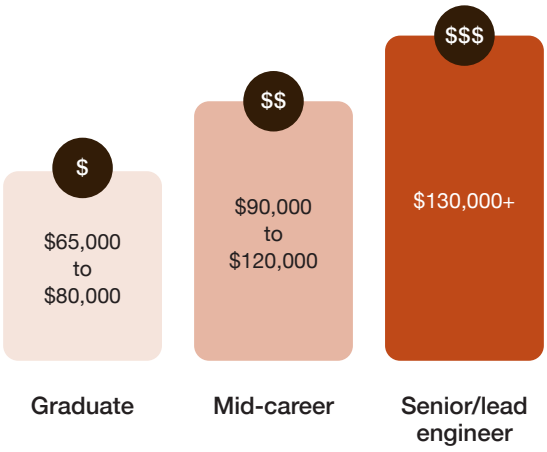
Project lead
Manage environmental inputs for infrastructure builds.

Policy or planning adviser
Help shape environmental decisions at government level.

Specialist consultant
Focus on water, biodiversity or cultural heritage.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Greater Sydney	Urban water systems, building upgrades and council environmental teams
2. Hunter	Mine rehabilitation and transition planning
3. Central-West Orana	Environmental approvals for solar and wind projects
4. South Coast	Land use planning, catchment management and biodiversity offsets
5. New England	Large wind and solar zones with major environmental planning work

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

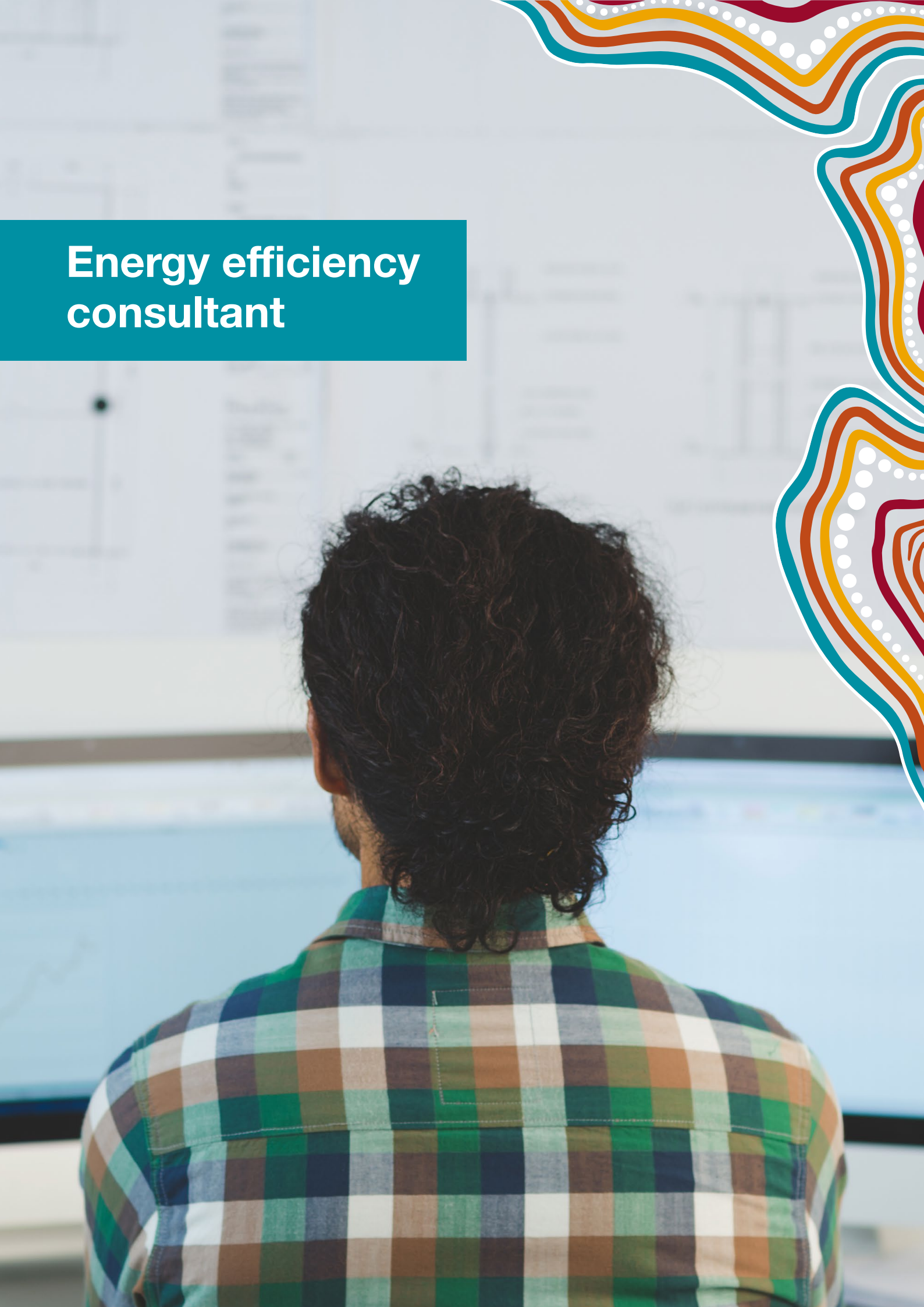
How to get started (step-by-step)

1. Finish Year 12, with key subjects
2. Apply for a Bachelor of Environmental Engineering
3. Join support programs (like CareerTrackers or TAFE Indigenous Centres)
4. Do placements or internships to get experience
5. Graduate and apply for junior or graduate roles
6. Add first aid, White Card or site tickets if needed
7. Work across different teams to build your skills
8. Pursue long-term pathways – leadership, policy or consultancy
9. Stay grounded – bring cultural knowledge and care into your work
10. Help guide the next mob coming through

Need help getting there?

- NSW Indigenous Centres – tutoring, cultural safety and wellbeing support
- CareerTrackers – paid internships and wraparound support for First Nations students
- Aurora Foundation – university access programs and mentoring
- TAFE NSW – Trusted Training and Career Pathways – enabling programs, short courses and tutoring pathways into university
- TAFE NSW Indigenous Centres – tutoring, cultural safety and wellbeing support
- UNSW Engineering Indigenous Preparatory Program – pathway into First Nations–led engineering
- University Indigenous Centres – tutoring, cultural safety and wellbeing support
- National Indigenous STEM Professional Network – mentoring, professional networking and connection to career pathway opportunities

Energy efficiency consultant



What's the job?

Energy efficiency consultants find smarter ways to use less energy; this helps reduce waste and emissions from buildings and systems. You might audit a council office, advise a school on lighting upgrades or help a business switch to efficient systems. In NSW, demand is growing as buildings shift towards net-zero targets. This job suits people who enjoy data, systems or sustainability and want to work on the demand side of the energy transition, helping reduce the load on the grid and cut energy bills for communities.

Why it matters for mob

Not all clean energy jobs involve building new things. Some are about making what we already have work better – saving money, cutting waste and designing smarter systems. This role suits mob who want to work across different places – such as schools, housing and council buildings – to help improve energy use where it matters. It's a quieter kind of impact, but just as important: making sure communities benefit from lower bills, cooler homes and systems that respect both people and place.

This job suits you if you …

- are passionate about sustainability and committed to environmental care and reducing energy consumption
- are an analytical thinker with strong attention to detail to assess energy data effectively
- can communicate effectively, explaining complex information clearly to clients and stakeholders
- are comfortable working both independently and collaboratively on various projects.

Add-ons to get site-ready

- White Card – required for construction sites
- First aid – often needed for field work
- Driver's licence – important for travel to regional or remote sites.

A day on the tools

Start early
Plan assessments and client meetings.

Head to site
You might be assessing how a building uses energy.

Get to work
Review power bills; run models; use auditing software; identify changes like better insulation, new systems or behaviour change.

Wrap up
Present your findings, talk with clients, write reports, track progress and help manage upgrades.

Pathway (training and qualifications)

Main pathway – university degree

Finish high school: aim for subjects like general maths, English and (if you can) physics, chemistry or environmental science.

Bachelor of Engineering (Environmental)

Complete a 3–4-year degree that builds your knowledge of energy systems, sustainability, auditing and regulation.

Optional – further study or certification

No formal licence or professional registration is required; however, some people complete postgraduate qualifications like a Master of Energy Management or get industry certifications (e.g. NABERS, Green Star or Certified Energy Manager).

Alternate pathway – start with practical experience or TAFE

Begin with a Certificate IV or Diploma in Energy Management, Building Performance or Auditing. These can lead to jobs as an energy auditor or provide a stepping stone into university or higher level consulting roles.

Career pathways

There are many directions you can take once you're qualified. Here are some roles you might step into as you gain experience:

Energy auditor
Assess how energy is used and where to improve.

Sustainability manager
Lead broader change in organisations or councils.

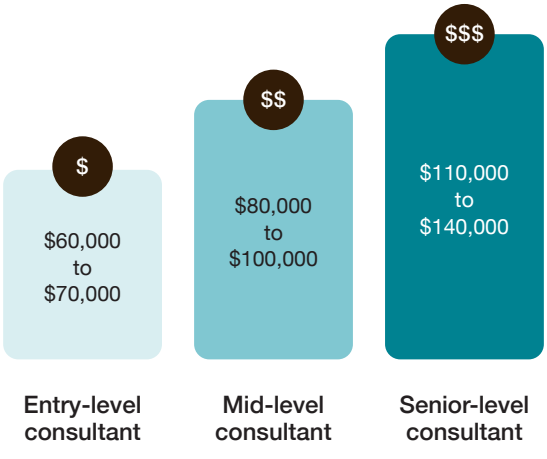
Energy manager
Manage energy use across large facilities or projects.

Consultant or adviser
work independently or with government on energy strategy.

Trainer or assessor
Teach others how to improve energy efficiency.

What you can earn

Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (NSW hotspots)

Region	Opportunities
1. Greater Sydney	Government and commercial clients focused on energy performance and upgrades
2. Illawarra	Building retrofits and energy assessments in health, education and council sites
3. Central Coast	Housing upgrades and energy efficiency initiatives for local communities
4. Western Sydney	Net-zero buildings, community energy hubs and industrial energy audits
5. Regional NSW	Schools, hospitals and local government buildings seeking energy improvements

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network explore local projects involving mob.

How to get started (step-by-step)

1. Finish high school with key subjects
2. Apply for a Bachelor of Engineering, Environmental Science or Sustainable Energy
3. Join support programs (like CareerTrackers or TAFE Indigenous Centres)
4. Get experience – through internships, work placements or audits
5. Add certifications or short courses (like NABERS or Green Star) if needed
6. Apply for junior consultant or auditing roles
7. Keep learning – new technologies and standards change fast
8. Work across different sectors to grow your skills
9. Support mob – help bring energy savings into community spaces
10. Lead the way – mentor others and help shape a sustainable future

Need help getting there?

- CareerTrackers – paid internships and wraparound support for First Nations students
- Aurora Foundation – university access programs and mentoring
- University Indigenous Centres – tutoring, cultural safety and wellbeing support
- TAFE NSW – Trusted Training and Career Pathways – enabling programs, short courses and tutoring pathways into university
- TAFE NSW Indigenous Centres – tutoring, cultural safety and wellbeing support
- National Indigenous STEM Professional Network – mentoring, professional networking and connection to career pathway opportunities

Other information

Getting job-ready

Need a birth certificate?
Local legal aid services or your land council can help so you can apply for ID and Working With Children Checks.

Worried about a police check or Working With Children Check?
Some jobs still accept you – check first before ruling yourself out.

No car or licence?
Some training programs offer lessons or help you get your licence – ask your job provider or TAFE.

Need gear or tools?
Programs like the New Energy Apprenticeships can help with uniforms, boots, and other job cost.

No internet or a computer?
Try your local land council, library or job hub for help getting online, writing and printing or applying for jobs.

Need help with people skills or confidence?
Programs can help with communication, teamwork or speaking up onsite. These are called job-ready skills and they matter too – ask your job provider or TAFE for support.

Unsure what's right for you?
Pre-employment programs, short courses or workshops can help you test it out before committing.

Living away from home

DIDO/FIFO
Some roles involve flying or driving to site for 1–3 weeks, then coming home for breaks.

Relocation help
Some employers may offer support or grants to help you move closer to work or training.

Accommodation support
You might stay in camp-style housing, share housing or access subsidies.

Cultural safety at work
Some employers offer yarning circles, support staff or Elders – look for places that value mob.

Homesickness and wellbeing
It's normal to miss home. Many programs now offer mental health and cultural support, especially for young workers.

Programs just for mob

Entry pathways and outreach

- Powering Up Workshops - Learn about jobs, projects and opportunities near you.
- Aurora Indigenous Pathways Portal - A comprehensive database of scholarships and resources for First Nations students, including access to support programs and mentoring.
- PowerMakers Program - Helps grow mob into leaders in clean energy.
- NSW government wraparound support - Various programs providing mentoring and networking opportunities for Aboriginal learners through culturally appropriate formats.

Apprenticeships and vocational support

- Aboriginal Employment Strategy (AES) - Helps mob get apprenticeships and stay supported while on the job.
- Busy at Work First Nation's Apprenticeships - Culturally sensitive support for First Nations apprentices in NSW and Queensland, partnering with local organisations to empower apprentices and employers.
- Employer-specific First Nations Pathways Program - May offer onsite/offsite supports including mentoring, wellbeing coaching and career guidance. Check the NSW Apprenticeship Finder Tool to identify employers with tailored support for mob.

Higher education and university support

- CareerTrackers - Paid internships and wraparound support for First Nations students.
- University & TAFE NSW Indigenous Centres - Tutoring, cultural safety and wellbeing support.

Mentoring and professional networks

- National Indigenous STEM Professional Network - Mentoring, professional networking and connection to career pathway opportunities.
- National Indigenous Australians Agency – Indigenous Skills and Employment Program (ISEP) - A place-based program connecting First Nations people to jobs, training, and career advancement opportunities.

Other support

- New Energy Apprenticeships Program: up to $10,000 support for apprentices in clean energy.
- NSW Apprenticeship Finder Tool: search local jobs or training providers.
- TAFE NSW – Trusted Training and Career Pathways: Enabling programs, short courses and tutoring pathways into university.