NINTIONELIMITED

Decarbonisation pathways guide

Queensland

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. Queensland (Qld) is one of the biggest players in the decarbonisation space, with some of the highest demand for workers across the country. Right now, there are already over 18,000 full-time jobs in clean energy, and that number is expected to climb to over 100,000 as Queensland builds its "SuperGrid" – a massive network of renewable energy, including wind, solar, batteries and hydrogen. Most of these jobs will be in regional areas like Townsville, Gladstone, Mackay and Toowoomba. If you're a sparkie, technician, construction worker, or want to work with new tech like wind or hydrogen, there's lots of opportunity to get in now and grow with the industry. These are steady jobs that let you work with your hands, care for Country, and build a future for your mob. See below what jobs you can get started in today.

This document gives details about 7 different jobs that have important roles to play in decarbonising industries. The jobs are electrician, wind turbine technician, solar installer, grid construction worker, civil construction worker, electrical engineer, and environmental engineer.

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 Qld
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 (or "sparkies") 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 Queensland, electricians are in high demand as the state builds Renewable Energy Zones (REZs). 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

Electricians are at the heart of the clean energy transition. It's a hands-on job that lets you work anywhere – city, bush, or coast – while helping power up communities. For mob, becoming a sparkie is about more than income. It's about building independence, growing skills, and staying connected to Country through meaningful, practical work.

This job suits you if you …

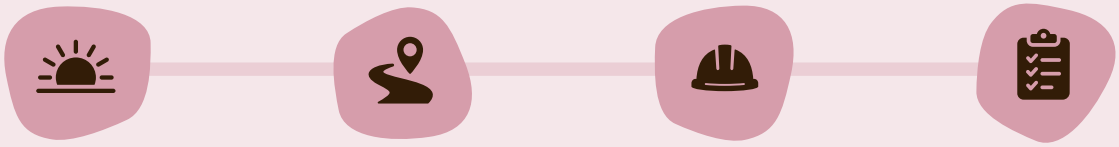
- like working with your hands and solving problems
- are focused and careful – safety matters
- enjoy being outdoors or working in different environments
- are up for a challenge and willing to learn new things
- have or can get a driver's licence (needed to travel between sites and onsite).

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 the Electrical Safety Office 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.

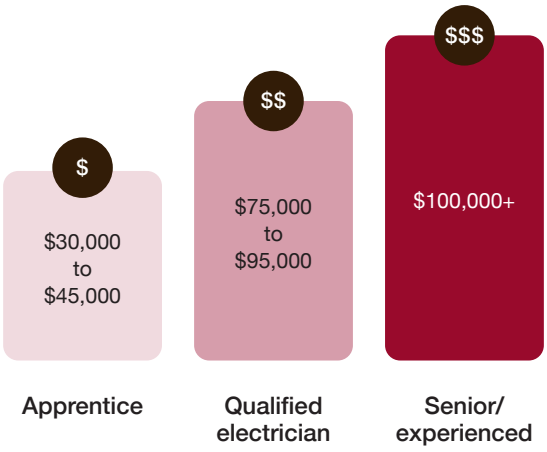
Solar or battery tech
Specialise in clean energy systems.

Inspector or compliance officer
Check safety and quality.

Start your own business
Become your own boss.

What you can earn

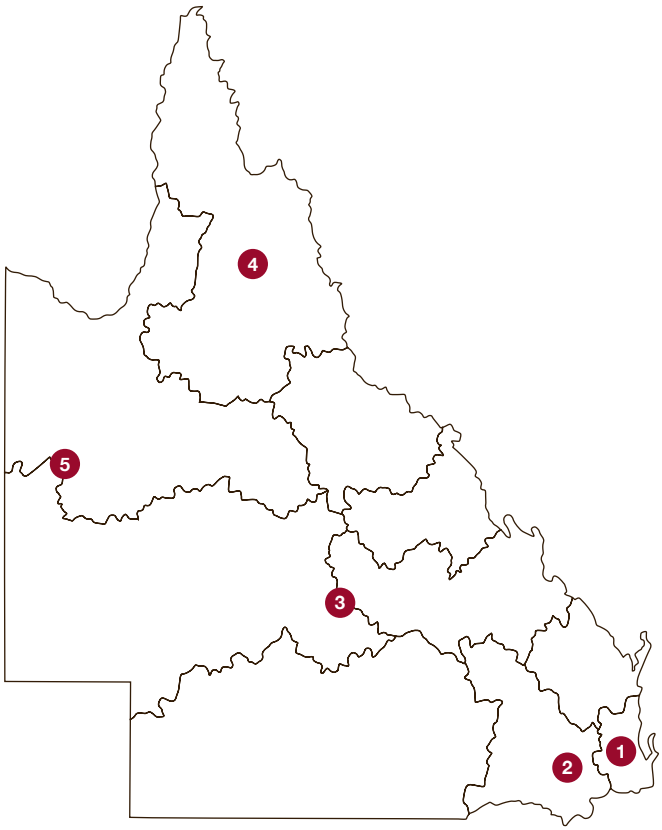
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. Brisbane Metro	Solar installs, retrofits, smart metering, EV chargers
2. Southern Qld	Large-scale wind and solar farms (e.g. near Warwick and Dalby)
3. Central Qld	Hydrogen, solar and battery hubs (Gladstone, Rockhampton)
4. Far North Qld	Microgrids and clean energy upgrades in remote communities
5. Western Qld	Battery projects and SuperGrid transmission lines (e.g. near Mount Isa)

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network to 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
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- Busy at Work Apprenticeship Finder Tool – search local jobs or training providers
- DESBT Apprenticeship Gateway Services – Qld Government search tool to find an apprenticeship and other types of support
- 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 Queensland, the expansion of renewable energy projects, particularly in designated REZs, has led to increased demand for skilled technicians in this field. 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 …

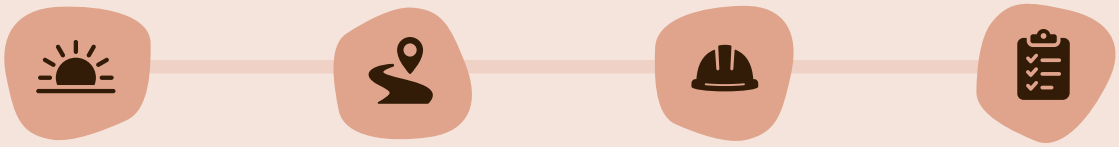
- are comfortable working at heights and in confined spaces
- have strong problem-solving skills and attention to detail
- are willing to travel and work in remote locations
- are physically fit and have good stamina
- have a commitment to safety and continuous learning.

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 the Electrical Safety Office 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.

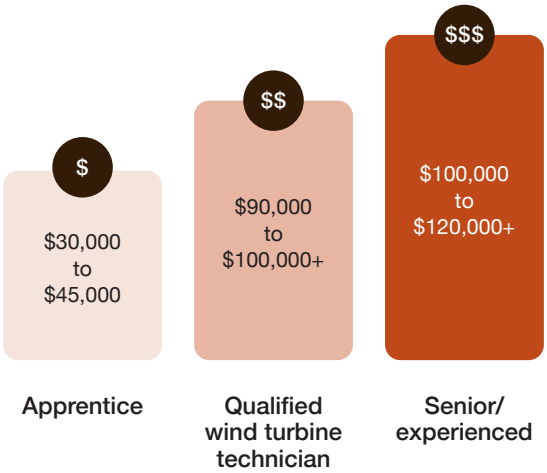
Blade repair specialist
Focus on turbine blade maintenance and repair.

Commissioning technician
Specialise in bringing new turbines online.

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

What you can earn

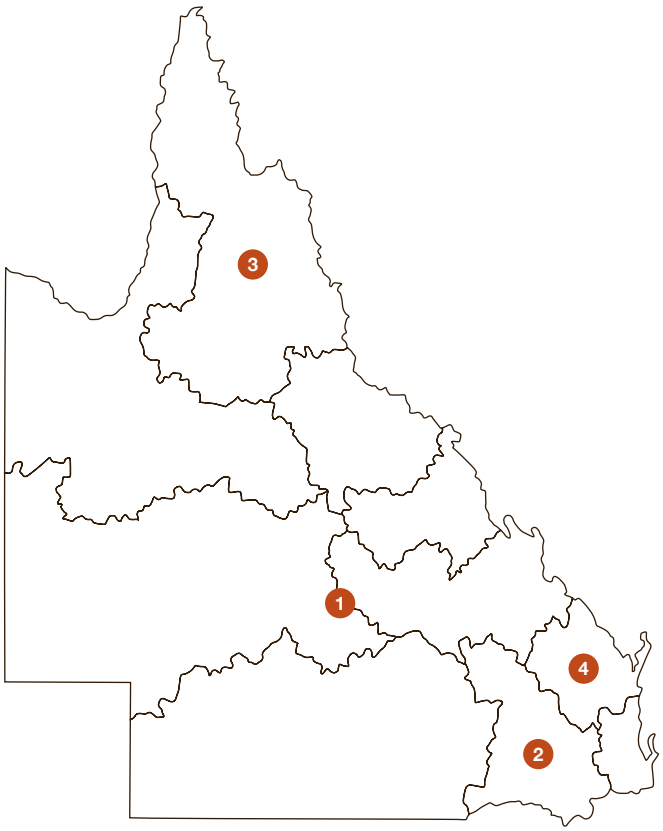
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. Central Qld	Major wind farm projects and maintenance roles
2. Darling Downs	Expansion of wind energy projects and new installations
3. Far North Qld	Ongoing maintenance and development of wind farms
4. Wide Bay–Burnett	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 to explore local projects involving mob.

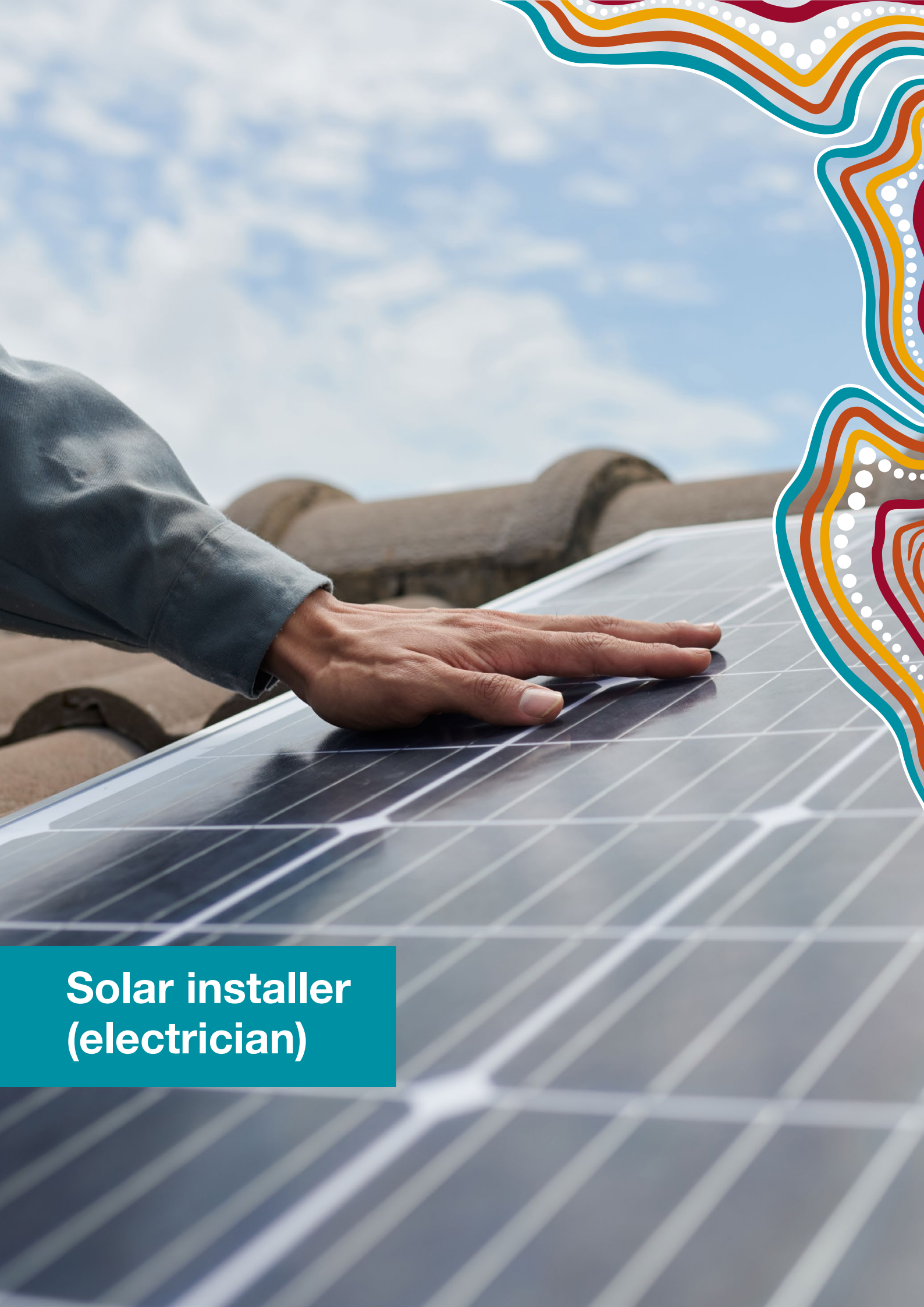


How to get started (step-by-step)

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
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- Busy at Work Apprenticeship Finder Tool – search local jobs or training providers
- DESBT Apprenticeship Gateway Services – Qld Government search tool to find an apprenticeship and other types of support
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel



Solar installer (electrician)

What's the job?

Solar electricians (or "sparkies") install and maintain solar systems — the panels you see on rooftops or at large solar farms. They ensure everything's wired up safely so homes and buildings can run on sunshine. In Queensland, solar is booming, and sparkies with solar training are in high demand. This job lets you work outdoors, earn good money, and help your community move to clean energy.

Why it matters for mob

Solar is one of the fastest-growing energy sources in Australia — and mob are already leading the way on projects across the country. Becoming a solar sparkie means you can work local or travel, get paid well, and build a future in clean energy. It's hands-on work with purpose — helping communities cut bills, stay cool, and protect Country.

This job suits you if you …

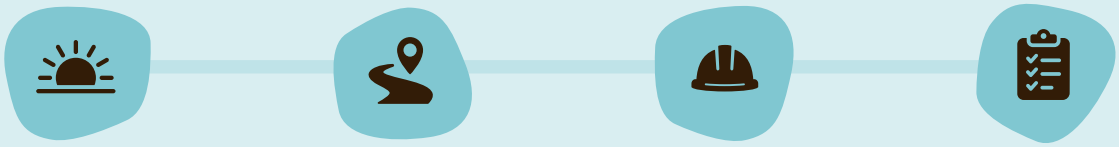
- are a qualified electrician looking to move into renewables
- enjoy working outdoors and at heights
- like hands-on work and solving problems
- are keen to help communities switch to clean energy.

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 or battery systems.

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 the Electrical Safety Office 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.

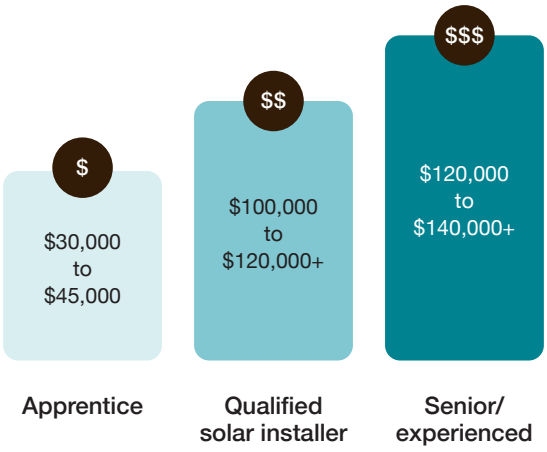
System designer
Specialise in designing solar PV systems.

Energy consultant
Advise clients on energy solutions.

Business owner
Start your own solar installation company.

What you can earn

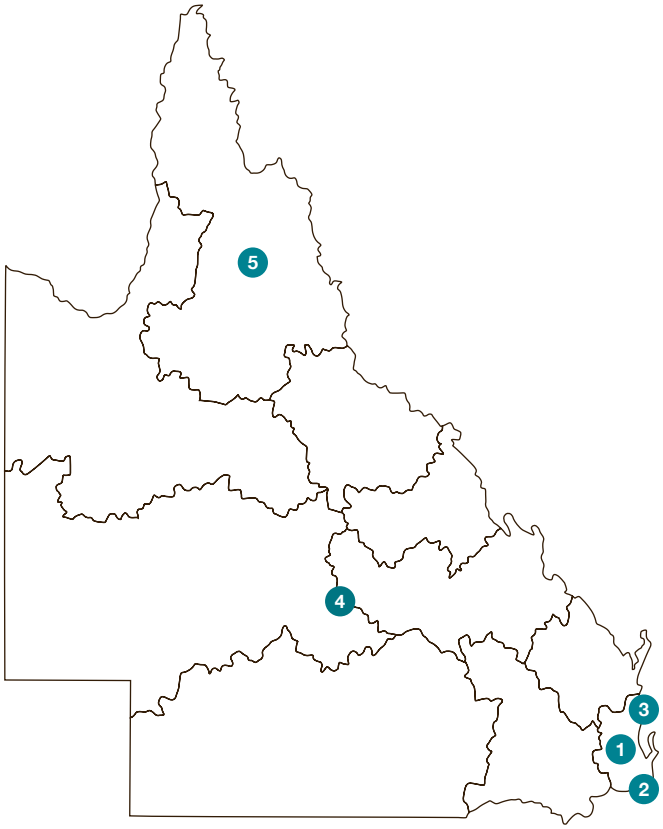
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. Brisbane Metro	High demand for residential and commercial installations
2. Gold Coast	Growing market with new housing developments
3. Sunshine Coast	Expansion in both residential and industrial solar projects
4. Central Qld	Strong community interest in sustainable energy solutions
5. Far North Qld	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 to 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
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- Busy at Work Apprenticeship Finder Tool – search local jobs or training providers
- DESBT Apprenticeship Gateway Services – Qld Government search tool to find an apprenticeship and other types of support
- New Energy Apprenticeships Program – get up to $10,000 for gear, tools and travel

Grid construction workers (transmission lineworkers)

What's the job?

Transmission lineworkers build and maintain the high-voltage powerlines that carry electricity across long distances. In Queensland, this work is critical as the state upgrades its grid to support renewable energy projects and replace retiring coal-fired power stations. Projects like CopperString 2032 and the Central Queensland Renewable Energy Zone are expanding the network, requiring skilled workers to ensure safe and reliable electricity delivery.

Why it matters for mob

This job helps power the future — not just through clean energy, but by opening real opportunities for mob to step into long-term, hands-on work. It's a way to earn good money, learn strong skills, and stay connected to Country. Whether you're climbing towers or working on big infrastructure builds, you're part of something that supports families and future generations. It also builds pride and leadership — with clear pathways to grow into specialist, supervisory or training roles over time.

This job suits you if you …

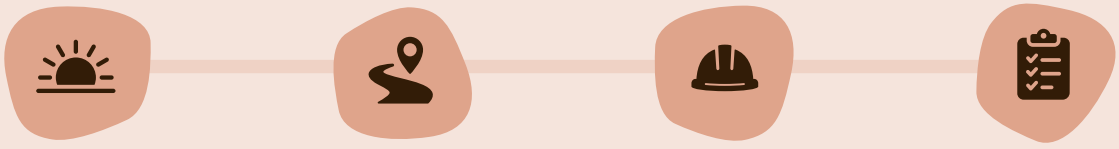
- enjoys hands-on, physical work
- are comfortable working at heights and outdoors
- can follow safety procedures and work in a team
- are willing to travel and work in different locations
- have or can get a driver's licence (often needed for access to site).

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.

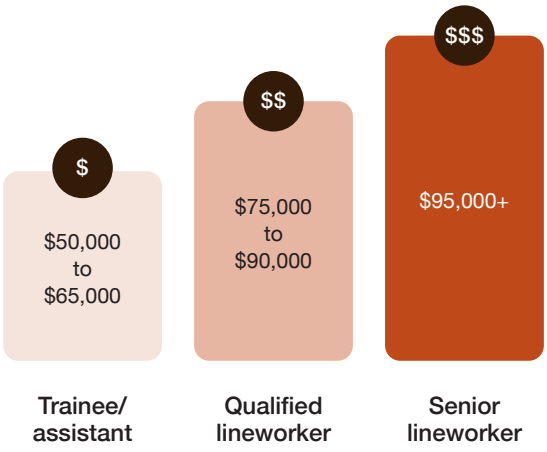
Team leader or supervisor
Manage crews and oversee projects.

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 (Qld hotspots)

Region	Opportunities
1. North West Qld	CopperString 2032 – connecting Mount Isa to the National Electricity Market
2. Central Qld	Central Queensland Renewable Energy Zone – new transmission lines for renewable projects
3. South East Qld	Upgrades to existing infrastructure to support increased demand and renewable integration

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network to 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
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- Busy at Work 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 help build the physical foundations of clean energy projects — from roads and drainage to foundations and earthworks. In Queensland, this work is vital as the state rolls out REZs, transmission lines, and large-scale solar, wind, and battery projects. Major builds like the Kaban Green Power Hub and the Borumba Dam Pumped Hydro Power Station are creating thousands of jobs across regional Queensland.

Why it matters for mob

This work connects mob to Country and to the future. Civil construction offers real, paid work on projects that will power communities for generations. It's a chance to gain skills, earn strong wages, and be part of building something lasting. These jobs are often based in regional areas, making them more accessible for mob living on Country. With the right support, they can lead to long-term careers in construction, energy, or even running your own business.

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 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.

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 Electrical Safety Office 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.

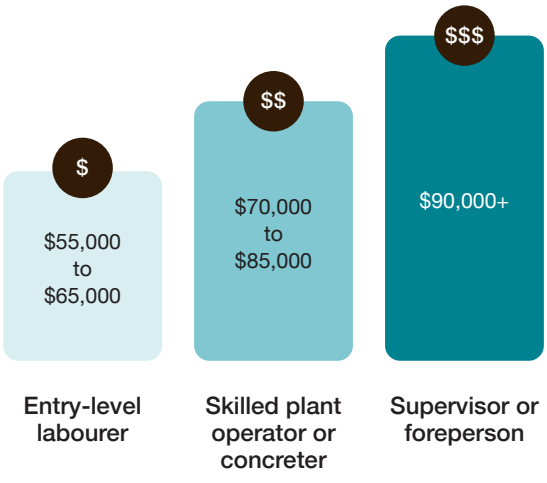
Site supervisor
Lead teams and manage construction sites.

Project manager
Oversee large-scale construction projects.

Business owner
Start your own construction or contracting business.

What you can earn

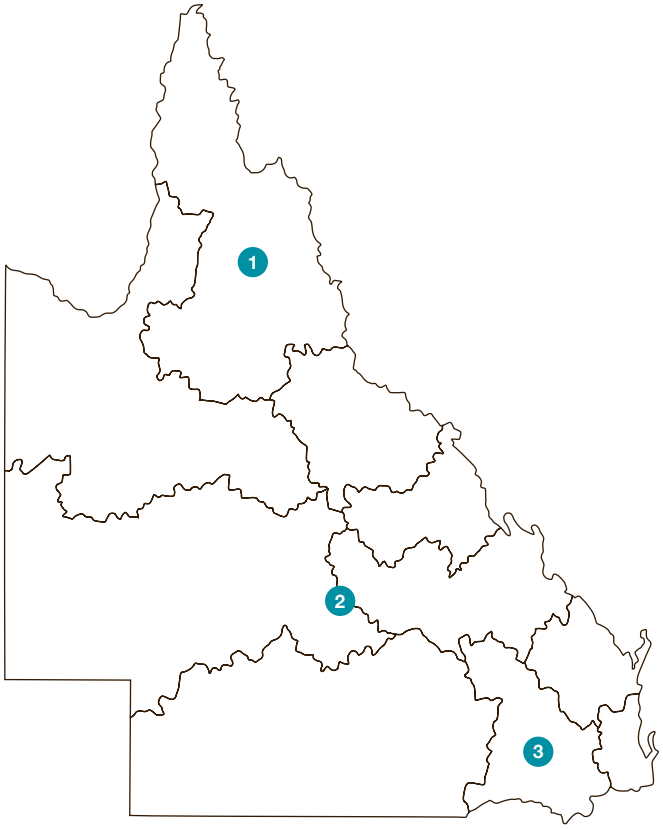
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. Far North Qld	Kaban Green Power Hub – part of the Northern QREZ, supporting 250 jobs
2. Central Qld	Borumba Dam Pumped Hydro Power Station – a proposed 2 GW / 48 GWh pumped hydro energy storage system
3. Darling Downs	Western Downs – a hotspot for renewable energy projects, including wind and solar farms

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



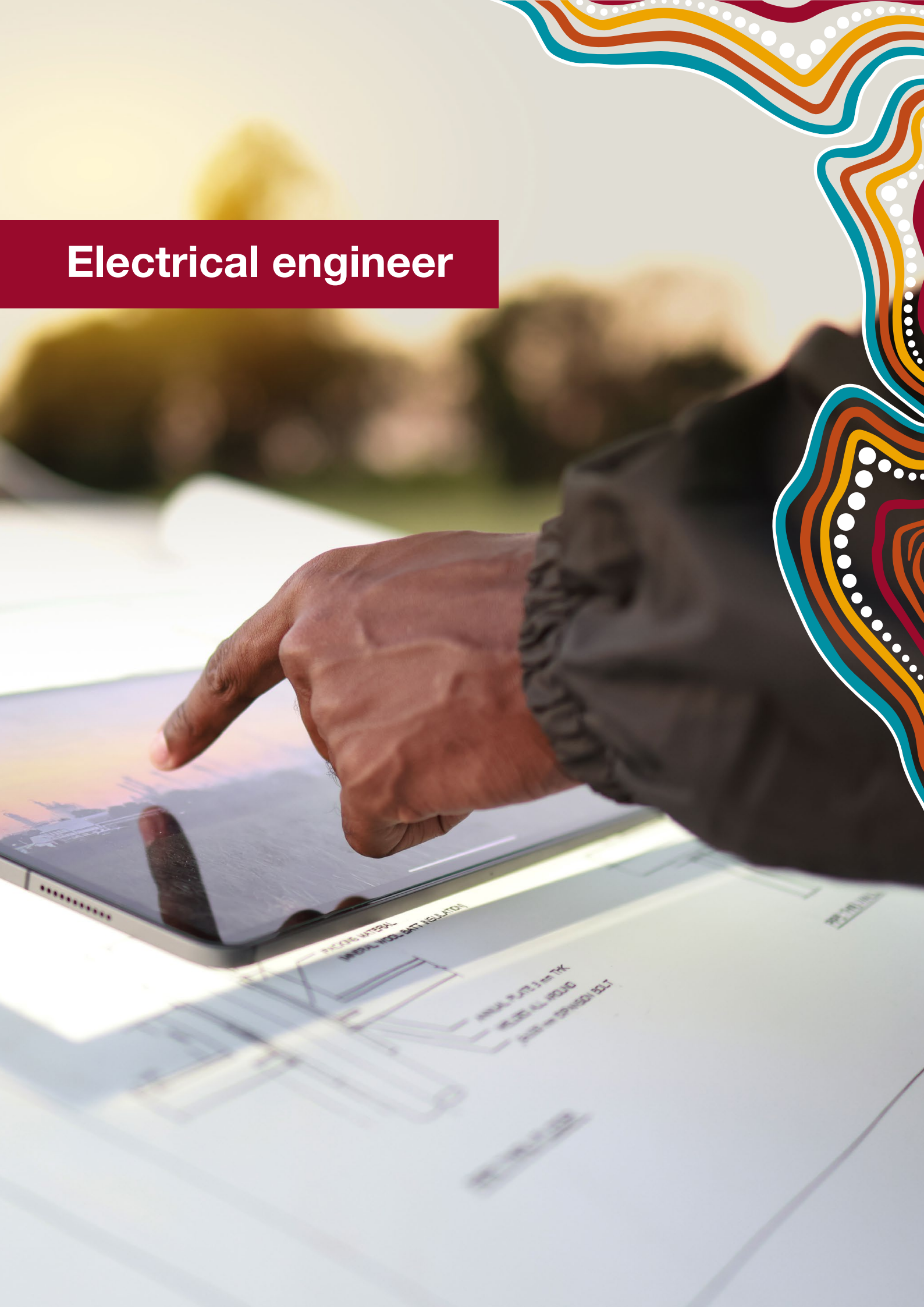
How to get started (step-by-step)

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
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- Busy at Work Apprenticeship Finder Tool – search local jobs or training providers
- 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 Qld, 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.

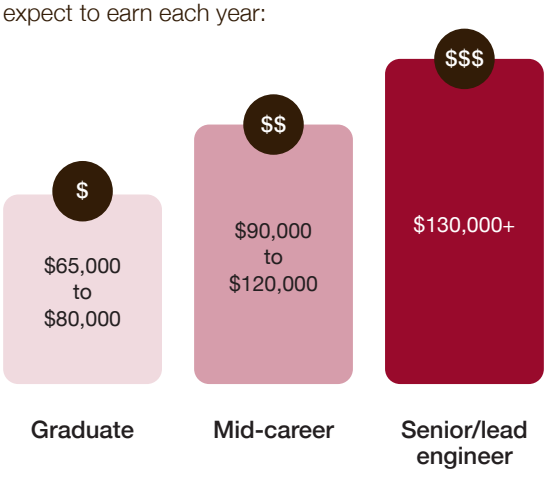
Control systems engineer
Work on smart grids, automation or robotics.

Energy systems engineer
Plan how renewables connect to the grid.

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

What you can earn

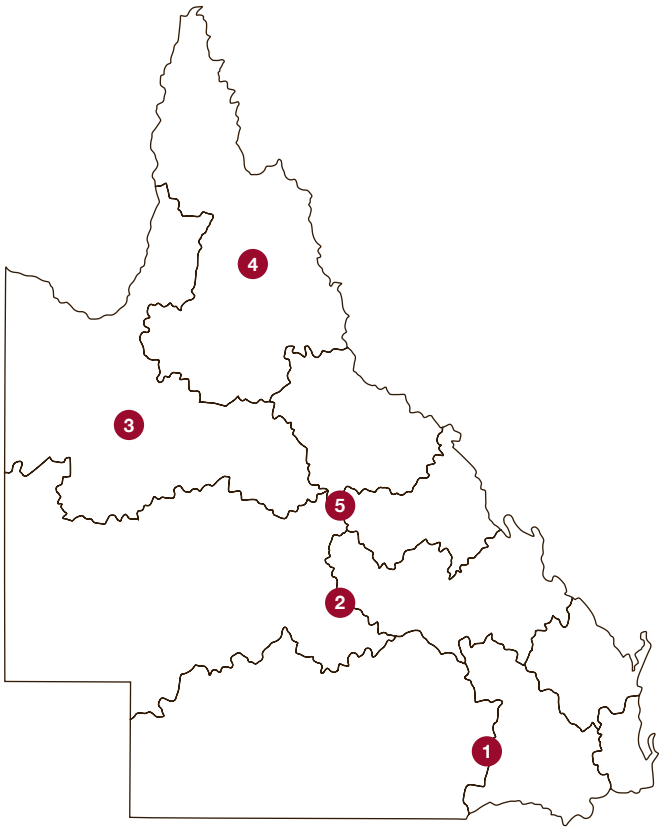
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. South East Qld	Grid upgrades, EV charging networks, and large-scale battery integration
2. Central Qld	SuperGrid transmission, renewable energy hubs, and hydrogen-electric projects
3. North West Qld	CopperString 2032 – major grid expansion linking Mount Isa to the NEM
4. Far North Qld	Microgrids and renewables supporting remote communities
5. Regional Qld	Clean energy projects requiring localised grid design and energy planning

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network to 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 – mentoring and academic support for mob at university
- CareerTrackers – paid internships and wraparound support for First Nations students
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- University Indigenous Centres – tutoring, cultural safety and wellbeing support
- 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 Qld, 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.

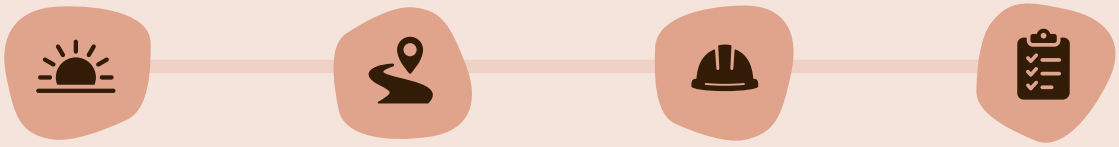
This job suits you if you …

- 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.

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.

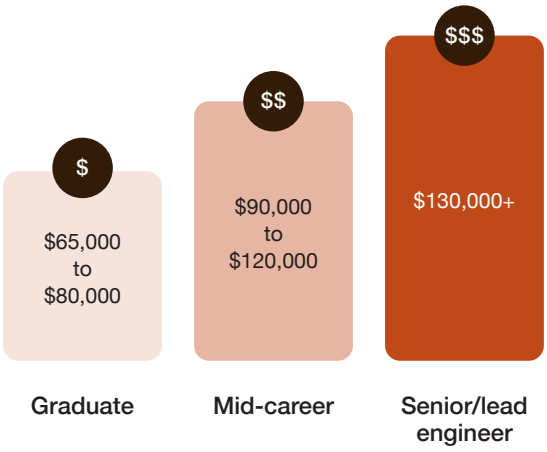
Project lead
Manage environmental inputs for infrastructure builds.

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

Specialist consultant
Focus on water, biodiversity or cultural heritage.

What you can earn

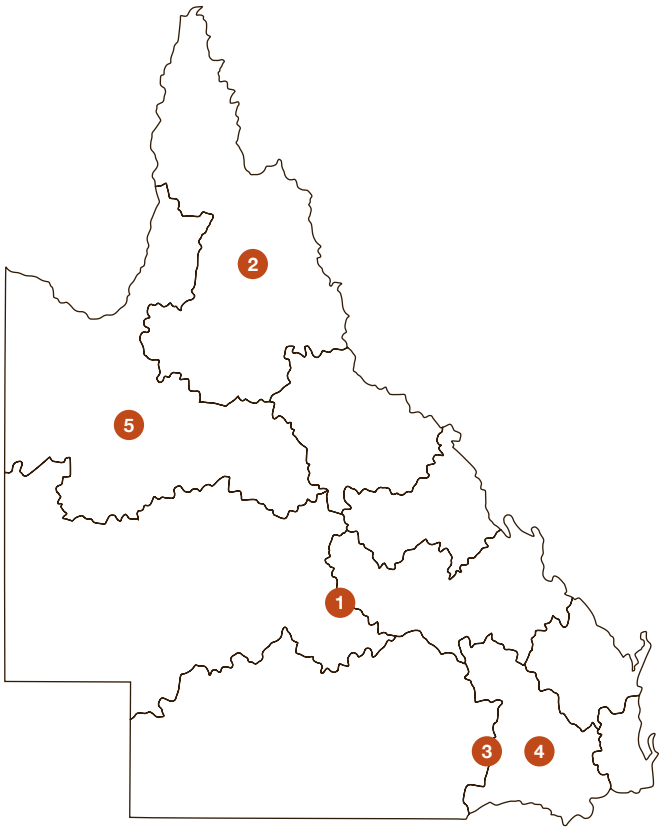
Pay will depend on your level of experience and nature of the role, but here's a general guide for what you can expect to earn each year:



Where the jobs are (Qld hotspots)

Region	Opportunities
1. Central Qld	Environmental approvals for large-scale solar, wind and hydrogen hubs
2. Far North Qld	Cultural heritage assessments, water management and mine rehabilitation
3. South East Qld	Urban sustainability projects and stormwater upgrades tied to infrastructure
4. Darling Downs	Biodiversity offsets, erosion control and renewables on farming land
5. North West Qld	Land use planning and environmental regulation around major grid builds

Jobs in the decarbonisation workforce are also located outside of these hotspots, visit the First Nations Clean Energy Network to 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?

- CareerTrackers – paid internships and wraparound support for First Nations students
- Aurora Foundation – university access programs and mentoring
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support
- University 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 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

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, partnering with local organisations to empower apprentices and employers
- TAFE Indigenous Centres – tutoring, wellbeing and cultural support

Higher education and university support

- CareerTrackers – paid internships and wraparound support for First Nations students
- University 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
- DESBT Apprenticeship Gateway Services – Qld Government search tool to find an apprenticeship and other types of support
- TAFE Qld – training and career pathways, enabling programs, short courses and pathways into university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