

# Returning to a sustainable Australia

Job opportunities for mob  
in the move to net zero





## 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.

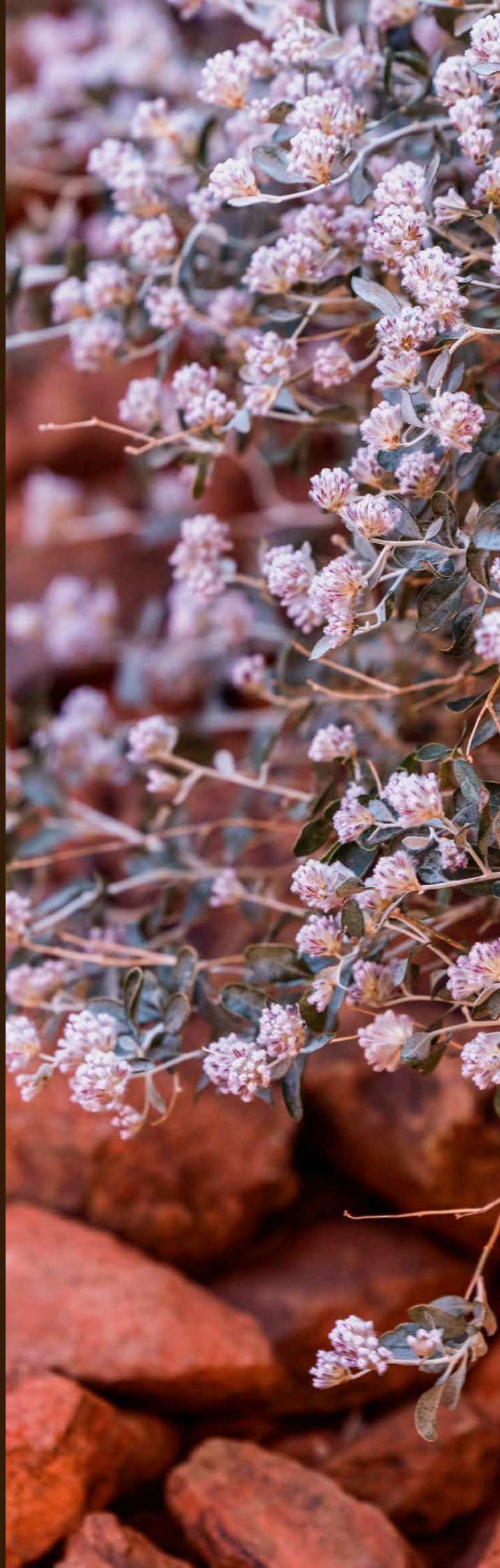
We sincerely thank the Cultural Safety in the Decarbonisation Transition Reference Committee for their invaluable guidance and support throughout the project.

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

This resource has been compiled using a range of materials. While care has been taken in its preparation, Ninti One and its partners accept no responsibility for the accuracy or completeness of any material contained in this document. All parties involved disclaim all liability to any person in respect of anything, and of the consequences of anything done or omitted to be done by any such person in reliance (whether wholly or partially) upon any information presented in this document







### 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.



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# Introduction

The world has to make some big changes to get back to a sustainable way of living. Our mob are experts in sustainable living! We preserved our natural resources and kept our culture alive for over 60,000 years. Our values and ways of living are needed to bring Australia back to being a sustainable country.

Most things we do in modern society are releasing greenhouse gases. These gases are building up in the atmosphere, causing global warming and leading to negative consequences for the planet. Some animal and plants species – both on land and in the sea – are already struggling to survive in these warmer conditions.

## Some of the biggest emitters of carbon dioxide and other greenhouse gases are:



Standard vehicles that run on diesel, gas and petrol



Electricity that is generated from fossil fuels



Building materials like concrete and steel

The move to net zero means reducing our greenhouse gas emissions, from these and other activities, back to a level that the planet can process. Reducing our emissions and increasing the amount of carbon dioxide that the natural environment can absorb is called **decarbonisation**.

Many jobs now focus on decarbonisation, which is creating a lot of opportunity to work in this space.

## Some of the biggest growth areas for jobs in Australia will be in these sectors:



Clean energy



Energy efficiency



Nature-positive projects

Careers in these sectors are growing fast and with a focus on making sure these industries are appropriate and safe places for First Nations people to work in. Joining these sectors allows First Nations people to lead the transition to net zero and work towards getting the planet back into balance.

This guide was developed by Ninti One, an Indigenous-led organisation, and was funded by the Department of Employment and Workplace Relations. The purpose of the guide is to inform mob about the existing and emerging job opportunities in sectors that are decarbonising and clearly map out the pathways into employment.

This guide is for people who are new to the workforce as well as people with existing experience and qualifications looking for new opportunities. You will discover:

- what industries are decarbonising and why, where jobs in those industries will be and how many there will be, as well as how mob can be involved
- more about some of the specific jobs in these industries
- how to find the pathway you can take, including discovering more about these industries, getting training, getting ready for work and finding jobs in decarbonisation.

## Decarbonising: which industry appeals to you?

This guide will explore many jobs in 3 sectors that are decarbonising. You can start by looking more generally at some of the key opportunities and benefits that each sector can provide for First Nations people, shown in Table 1.

Opportunities and benefits	Clean energy	Energy efficiency	Nature positive
Ability to work on Country	Possibly	Yes	Yes
Ability to work in community	Possibly	Yes	Yes
Outside work	Yes	Limited	Yes
Work with flora and fauna	No	No	Yes
Utilise traditional knowledge	Cultural heritage	No	Yes
Ability for direct community outcomes	Yes	Yes	Yes
Alignment with Indigenous values	Yes	Yes	Yes
Alignment with common skillsets and experience of First Nations people	Cultural heritage	No	Yes
Entry-level opportunities	Yes	Yes	Yes
Meeting cultural obligations	Yes	No	Yes
Land stewardship	Possibly	No	Yes

Table 1: Key opportunities and benefits summary

Clean energy



## What and why

Electricity generation from burning fossil fuels (coal, oil and gas) is responsible for over one-third of Australia's greenhouse gas emissions. Clean energy or renewable energy technologies harness nature's natural and renewable resources to create electricity. Renewable energy is also cheaper than fossil fuels in many cases.

The most common technologies used in the near future will be solar panels and wind turbines for generation and batteries for energy storage.

## Where will the jobs be?

Large clean energy projects are most likely to be located where renewable energy resources (like sun and wind) are strongest and there is access to large power lines. Some of these areas are called renewable energy zones, and a lot of large-scale projects will be constructed in these areas.

Large projects may also be developed near mines or near ports.

Rooftop solar panels are also popular in Australia and can be installed all around the country.

## Scale of the opportunity

Estimates show that we need a huge increase in clean energy workers between now and 2050. One study estimates that we need to grow from 26,000 clean energy workers to 85,000 by 2030 and 194,000 workers by 2050.<sup>1</sup> Already, not enough people are working in many of the jobs needed in the clean energy sector to reach our decarbonisation targets.

## How is mob involved?

Right now, First Nations people make up less than 2% of the clean energy workforce. But around the country, a growing number of clean energy companies and projects (from community scale to large scale) are Indigenous-led.<sup>2</sup>

<sup>1</sup> Accenture, Australian Industry Energy Transitions Initiative, 2023, [Skilling Australian industry for the energy transition](#).

<sup>2</sup> First Nations led or partnerships in clean energy projects across Australia, [First Nations Clean Energy Network website](#).

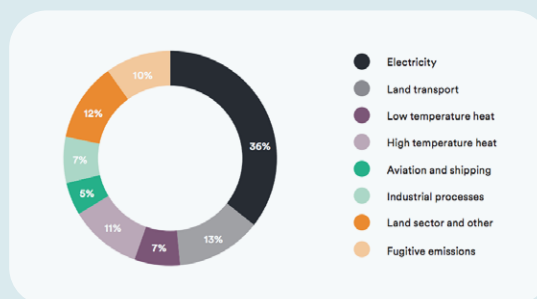


Figure 1: Breakdown of Australia's greenhouse gas emissions by sector. Source: [Renew Economy](#)

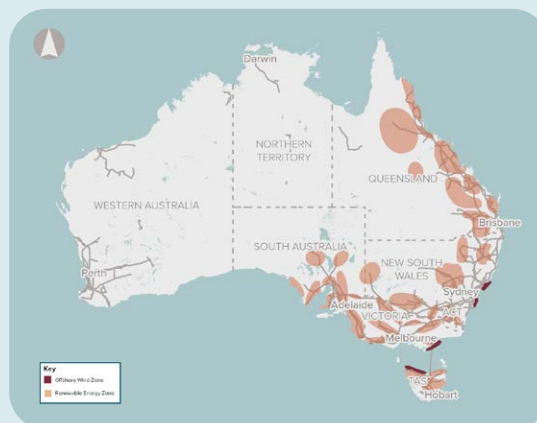


Figure 2: Renewable energy zones in Australia. Source: [Infrastructure Australia](#)

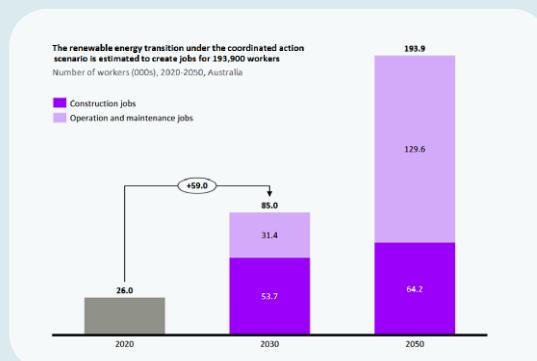


Figure 3: Possible number of jobs created in Australia for the clean energy transition. Source: [Skilling Australian Industry for the Energy Transition](#)



Figure 4: First Nations project tracker. Source: [First Nations Clean Energy Network](#)



# Energy efficiency



## What and why

Energy efficiency is a measure of how much energy or electricity is used to perform a task. When a building is energy efficient, it uses a small amount of energy to keep the temperature right, provide hot water and run lights and appliances.

Housing in Australia is generally not very energy efficient. Luckily, lots of things can be done to improve energy efficiency both when a house is built and after it has been built.

Some of the ways to improve energy efficiency include installing insulation in walls, ceilings and floors; using double glazed windows; upgrading to solar hot water systems or heat pumps; and changing lighting to LEDs.

## Where will the jobs be?

Energy-efficient new-builds and upgrades are happening all over the country in residential and commercial buildings. Indigenous housing, particularly in warmer parts of Australia, can be made much more comfortable and suitable through energy-efficient design and deliver lower electricity and gas bills for families.

## Scale of the opportunity

The Energy Efficiency Council estimates that the workforce to deliver energy efficiency upgrades in Australia needs to grow up to 2% every year until 2030 to hit our decarbonisation targets.<sup>3</sup>

A lot of the job growth will be for tradespeople, technicians and labourers, mostly in plumbing; heating, ventilation and air-conditioning; electrical and insulation installation, as well as in higher skilled roles such as engineers and energy assessors.

## How is mob involved?

The construction industry is a significant employer of First Nations people, employing 10% of the working population.<sup>4</sup> The fastest growth occupations among younger First Nations people (15 to 34 years) in metro regions includes building and plumbing labourers (29% growth) and plumbers (24% growth). In the older age brackets, growth for electricians was high (24%), demonstrating strong interest in these occupations.<sup>5</sup>

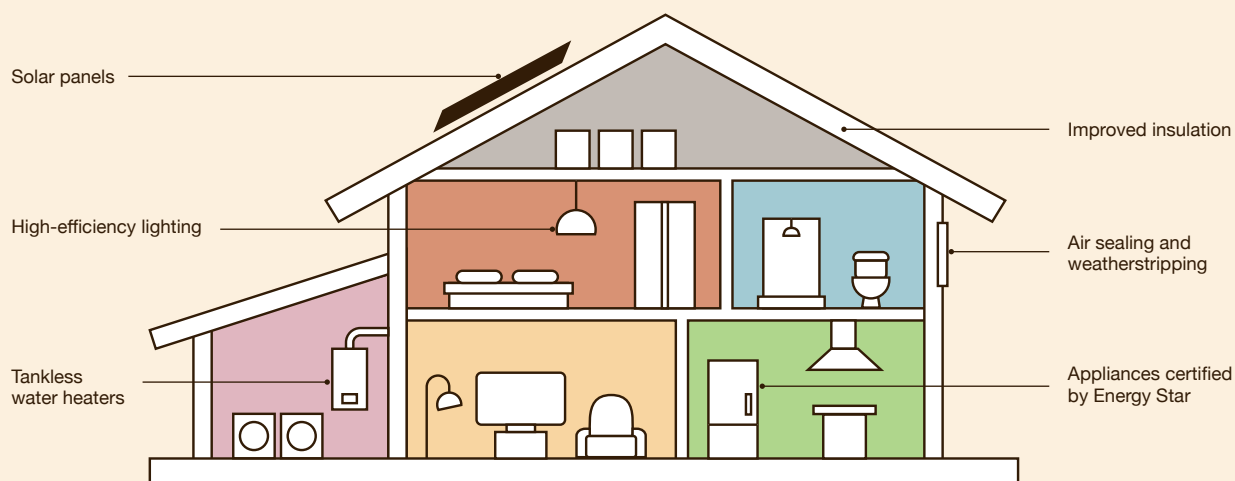


Figure 5: Features of an energy-efficient home.

<sup>3</sup>Energy Efficiency Council, 2023, [Commercial building energy upgrades workforce mapping: Clarifying the professional development pathways for trades and professions for decarbonising Australia's commercial buildings – Final report](#).

<sup>4</sup>AIHW analysis of ABS 2022c.

<sup>5</sup>Jobs and Skills Australia, [First Nations People Workforce Analysis](#).



# Nature positive projects





## What and why

Nature-positive projects increase the amount of carbon that is removed from the atmosphere naturally or reduce the amount of carbon released into the atmosphere. This is sometimes called carbon farming. Carbon farming involves managing vegetation, fire, soil or livestock to increase the storage of carbon in our landscapes. Carbon-reduction projects reduce carbon emissions through activities like traditional fire management and livestock emissions management.

## Where will the jobs be?

Nature-positive projects can occur all around Australia and will be most appropriate in rural and remote locations. Different projects will be suited to different climates and ecosystems.

## Scale of the opportunity

It's been recommended that Australia should aim to revegetate 55 million hectares of land by 2030 to increase the amount of carbon absorbed. That would generate an estimated 40,000 new jobs.<sup>6</sup> Australia's carbon farming sector is also estimated to deliver between 10,500 and 21,000 jobs to help us reach our decarbonisation goals.<sup>7</sup> The Australian Government is also investing in Indigenous rangers, planning to create 1,000 new positions by 2030.

## How is mob involved?

There is already a growing Indigenous carbon farming sector with strong leadership demonstrated by organisations such as the Indigenous Carbon Industry Network (ICIN) and the Aboriginal Carbon Foundation. Together, First Nations-led projects abate 1.2 million tonnes of carbon emissions per year and employ hundreds of Indigenous people in some of Australia's most remote places.<sup>8</sup>

### Carbon Method Zones

- Savanna
- Desert
- Rangelands (east)
- Rangelands (west)
- Agricultural (east)
- Agricultural (west)

### All Active ERF Projects (by Land Sector Activity)

- Savanna burning
- Protect existing forest
- Planting forest (native)
- Let forests regrow
- Soil carbon
- Managed forest and harvesting

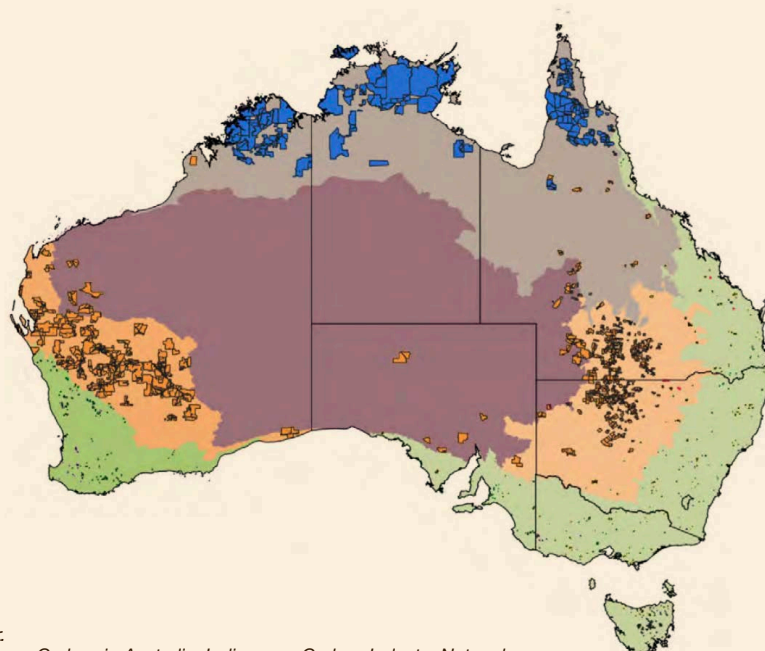


Figure 6: Active carbon projects by land sector.

Source: *Mapping the Opportunities for Indigenous Carbon in Australia*, Indigenous Carbon Industry Network

<sup>6</sup> Beyond Zero Emissions, 2020, [The Million Jobs Plan](#).

<sup>7</sup> Carbon Market Institute, 2017, [Carbon Farming Industry Roadmap](#).

<sup>8</sup> Indigenous Carbon Industry Network, 2022, [Indigenous Carbon Projects Guide](#).



# Job spotlights

As you've seen, many different jobs are helping to reduce carbon emissions. Let's take a closer look at a few of the options.

## This person did it ...

Jannah joined her brother's refrigeration mechanic company to lend a hand occasionally. After a while she decided to start an apprenticeship in refrigeration and then became the first female refrigeration technician in Cairns. She says that when she was growing up, there were no brown women working as refrigeration technicians for her to look up to. She's determined to change that. In 2022, Jannah was named Australian Apprentice of the Year at the Australian Training Awards.

'I was a single mum, 4 kids – I literally paid our bills and was about \$200 in the red every week. I bought my first ever brand-new car, as a reward for myself, when I finished my apprenticeship; obviously, I doubled my annual income.'



# Electrician

As an electrician you can expect to be in high demand into the future!

Electricians will be needed for rolling out large-scale renewable energy developments like solar farms and wind farms.

There will also continue to be strong demand for small-scale rooftop solar installers and domestic/commercial electricians. Variety and strong future career pathways are key highlights for sparkies, as well as the ability to work just about anywhere.

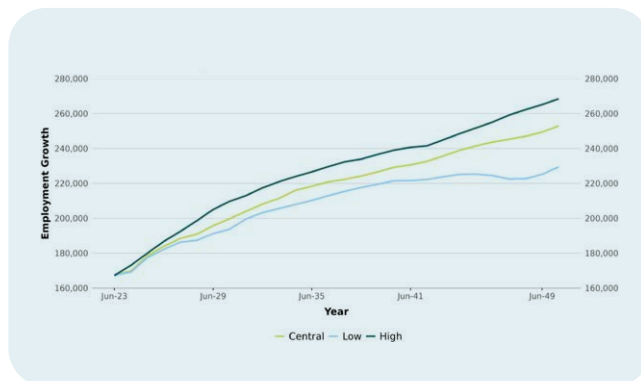


Figure 7: Demand for Electricians to 2050. Source: Deloitte Access Economics 2023, *Australia Needs 2.2 million Clean Energy Workers by 2050*

## How to get there

### Certificate II in Electrotechnology

#### Optional pre-apprenticeship course

**Duration:** from 4 months to 12 months (typically)

**Pathways:** Also a pathway to refrigeration mechanic and electrical trade assistant

**Delivery mode:** Face-to-face, through high school and online options

**Cost:** Varies from no cost to \$5,000 depending on individual circumstances

### Apprenticeship: Certificate III in Electrotechnology Electrician

**Duration:** 4 years

Get paid while you learn and gain hands-on experience.

The program covers essential skills and knowledge for working with electrical systems and equipment, including installation, testing, fault finding and repair.

### Apply for an electrician's licence

After completing an apprenticeship, you can apply for an electrician's licence.

An electrician's licence opens the door to many job pathways in clean energy, energy efficiency upgrades, transmission networks and more!





### **This person did it ...**

Chrae is the director of Envision Energy, a 100% First Nations-owned and First Nations-operated company specialising in renewable energy. He has a vision for paving the way for young First Nations people to enter the energy sector. A proud Arrernte and Māori man originally from Mparntwe, Alice Springs, Chrae started his career through an electrical apprenticeship. 'I was given an opportunity coming out of school to do a school-based apprenticeship with an Indigenous company in Alice Springs named Ingkerreke. I did my apprenticeship with them, learnt my trade.'

Chrae is passionate about the opportunities that clean energy can provide to our communities, including the employment opportunities for our young people.

'Now I've started Envision Energy with the goal of providing power to the community and providing a pathway for youth to build a brighter future through renewable energies or the electrical trade, just like what was given to me.'

# Wind turbine technician

Imagine enjoying some of Australia's most beautiful landscapes while working atop a 150 m wind turbine!

The wind power sector is expected to undergo massive growth. The number of people employed to construct, install, operate and maintain new wind energy projects is expected to almost double in 5 years, jumping from 3,700 in 2022 to 6,600 by 2027.<sup>8</sup>

The opportunities don't stop in Australia – wind turbine experience will be required all over the world with some of the highest needs expected in the USA, India, Brazil, Columbia, Egypt, China and Japan!<sup>9</sup>

## How to get there



<sup>8</sup> Renew Economy, 2023, [Wind energy workforce needs to double in Australia to help deliver "colossal growth"](#).

<sup>9</sup> Global Wind Organisation and Global Wind Energy Council, 2024, [Global Wind Workforce Outlook 2024 - 2028 Report](#).



### This person did it ...

Havana grew up with a close connection to Country. She says, 'We just lived off the land the way it was meant to be lived off, and we were completely sustainable. It really taught me a lot about being close to the land and having to respect it because it was like, how do we survive with no power or things like that.' After working at a plant nursery, Havana decided to do an Environmental Science degree at Deakin University in Melbourne.

'We learned about reinstating forest areas that have been destroyed through bush fires, deforestation and land-clearing practices. It's been interesting to learn about building up these areas and then the decarbonisation sector, and reversing the effects of carbonisation in the atmosphere, the role of government and taking steps forward in sustainable energy with the use of wind turbines, solar panels and more.'

Havana entered her studies through the National Indigenous Knowledges Education Research Innovation Institute (NIKERI Institute) which facilitates a pathway for First Nations students to participate in higher education at Deakin University.

# Ranger

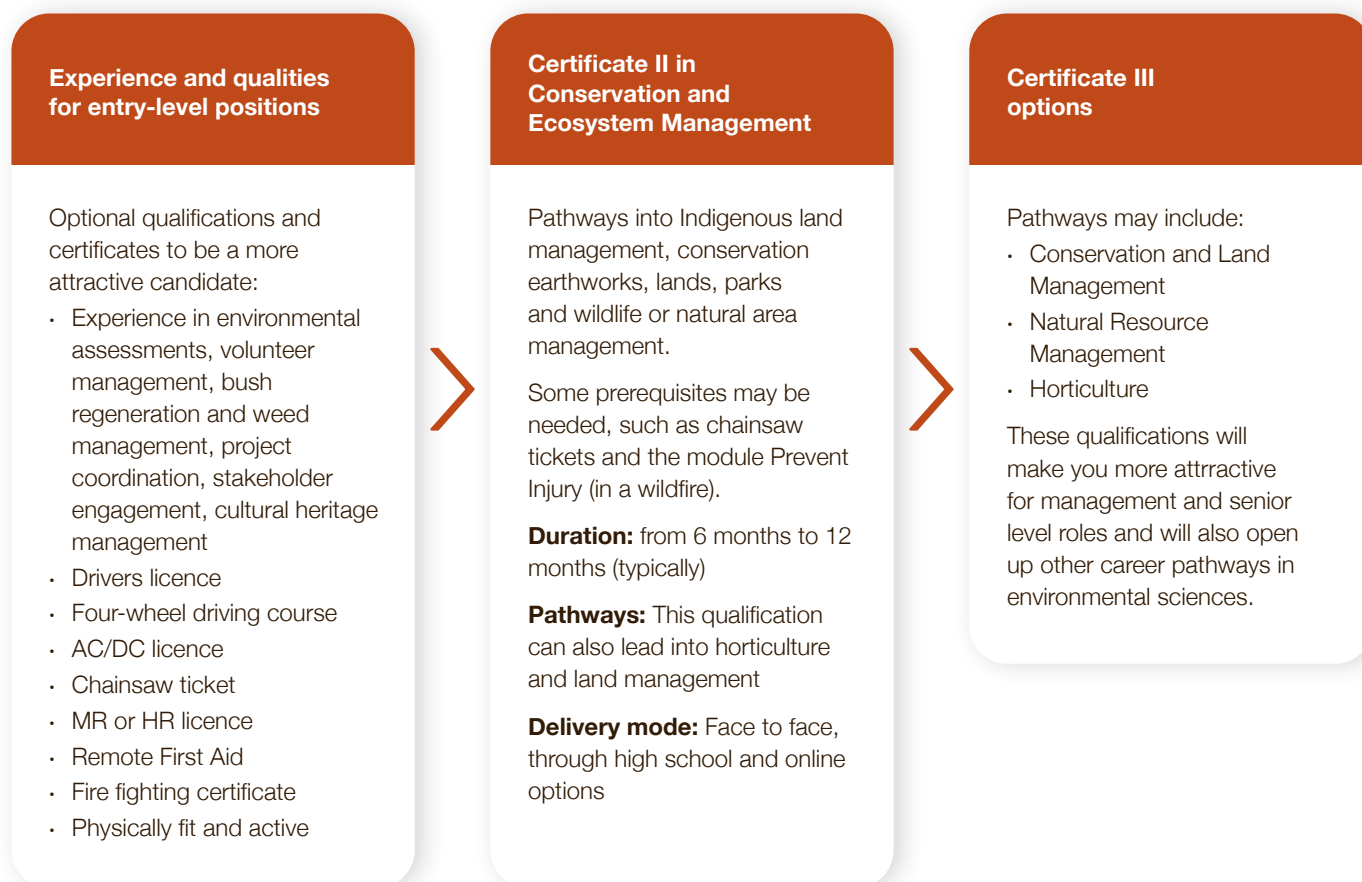
Do you love caring for country? Make it a career by becoming a ranger. Many opportunities are emerging for Indigenous rangers to help decarbonise Australia.

For example, large-scale renewable energy projects require ongoing land management, and traditional fire management reduces the risk of bushfires that lead to massive amounts of carbon being released from burned forests. Reforesting and improving the health of natural ecosystems means more carbon gets stored in the natural environment, and markets now generate revenue for projects to achieve those goals.

Find Indigenous-led carbon projects on the [ICIN website](#).

## How to get there

Pathways into ranger roles can be less traditional than for some other roles. Contact your local ranger group for guidance on the type of skills and experience they expect you to have.



## Find your pathway to work in sectors that are decarbonising

Consider what skills you want to develop and what type of work you enjoy.

Sign up at the [myfuture website](#) to access a range of career pathway resources to help you work out what jobs might interest you.

Start with the 'My career profile' tab to use your skills, interests, values and preferences to find careers that might be best suited to you.

The screenshot displays the myfuture website interface, which is organized into a grid of resource cards. The top section features nine cards, each with an icon and a title: 'My career profile' (with a path icon), 'Occupations' (with a tree icon), 'Industries' (with a person and gear icon), 'Career articles' (with a document icon), 'Courses' (with a book icon), 'Career bullseyes' (with a target icon), 'Career stories' (with a person icon), 'Job seeker resources' (with an apple icon), and 'User guide videos' (with a video icon). Each card provides a brief description of the resource. Below this grid, there are two larger sections: 'Skills' and 'Interests'. The 'Skills' section includes a heading, a brief explanation of the activity, and four circular icons representing different skill areas: 'Caring for animals', 'Learning how things work', 'Finding answers to questions', and 'Installing equipment'. The 'Interests' section also includes a heading, a brief explanation, and four circular icons representing different interest areas: 'Agriculture', 'Engineering', 'Chemistry', and 'Electronics'. The entire interface is set against a light blue background with a white grid.

**My career profile**  
Complete activities to identify interests, values and skills, and view suggested occupations to explore career pathways.

**Occupations**  
Explore over 350 occupations describing tasks, skill levels and current labour market information.

**Industries**  
Access important information (including employment prospects) for each industry.

**Career articles**  
Discover practical information to support your career exploration.

**Courses**  
Discover a course for you by viewing current higher education and vocational education and training (VET) courses.

**Career bullseyes**  
Find out what career pathways are related to school learning areas.

**Career stories**  
Learn tips and tricks by reading real-life career stories about personal experiences.

**Job seeker resources**  
Discover resume and cover letter templates and other resources to help you find and gain a job.

**User guide videos**  
View short videos that demonstrate key sections of the website to learn how to get the most out of myfuture.

**Skills**  
The Skills activity helps you to identify the skills you may like using at work. Different occupations require different skills. Identifying your skills can assist in planning your career pathway.  
Select the option that you are most skilled at from the 21 choices below.

Caring for animals or Learning how things work

Finding answers to questions or Installing equipment

**Interests**  
The Interests activity helps you to identify what you may like doing at work. Identifying your interests can be a good starting point for thinking about your career.  
Select the option that interests you more from each of the 21 questions below.

Agriculture or Engineering

Chemistry or Electronics

Figures 8-10: The myfuture website has access to a range of career pathway resources to help you work out what jobs might interest you. Source: [myfuture](#)



## Research different trades and industries

Choosing a future career is not easy!

There are so many industries and jobs out there that you can discover, and more are developing all the time. Now that you know about some of the rising needs to help Australia decarbonise, you may want to learn more about the industries and the careers they offer.

Start by clicking on the below resources to learn more about these transformational industries:

### Clean energy

[The First Nations Clean Energy Network](#)

[The Clean Energy Council](#)

[Futureville renewable energy careers game](#)

### Energy efficiency

[The Energy Efficiency Council](#)

[Bringing It Home Program - Indigenous Clean Energy \(Canada\)](#)

Tradespeople in your area

### Nature positive

[Aboriginal Carbon Foundation](#)

[Indigenous Carbon Industry Network](#)

Your local ranger group

## More resources

Find Indigenous ranger groups on the [Department of Climate Change, Energy, the Environment and Water \(DCCEEW\) map](#).

Read the [Queensland Government's Future Energy Jobs Guide](#) for detailed information on the careers and pathways available in the clean energy industry.

Check the predicted demand of different clean energy occupations at the [Clean Energy Council's website](#).

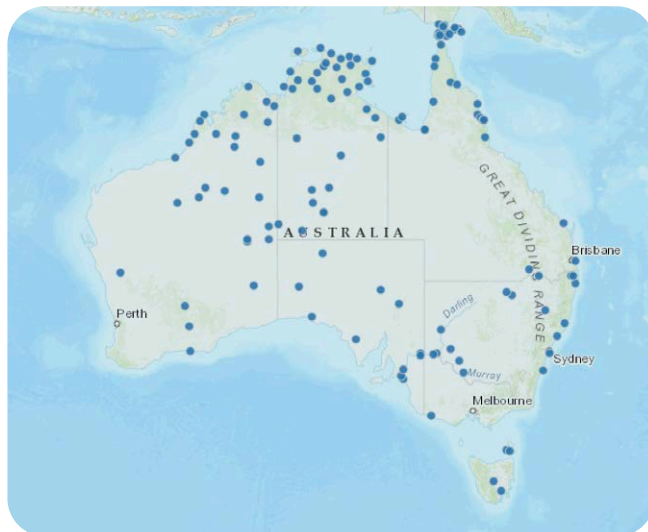


Figure 11: Indigenous ranger groups map. Source: Department of Climate Change, Energy, the Environment and Water (DCCEEW)



# Job pathways

Jobs are varied, with different entry requirements and pathways. The following tables show many of the critical jobs needed across these 3 sectors that are being decarbonised. The jobs include direct-entry roles with on-the-job learning and careers that have VET, TAFE, apprenticeship and university pathways.





## Technicians, labourers and trades workers

Pathway	Clean energy	Energy efficiency	Nature positive
<b>Labourers</b>			
Direct entry	<ul style="list-style-type: none"> <li>• Civil labourers</li> <li>• Construction labourers</li> <li>• Structural steel construction workers</li> <li>• Trades labourers</li> </ul>	<ul style="list-style-type: none"> <li>• Trades labourers</li> </ul>	<ul style="list-style-type: none"> <li>• Civil labourers</li> </ul>
<b>Communications / relationship building</b>			
Direct entry	<ul style="list-style-type: none"> <li>• Community liaison</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• Community liaison</li> </ul>
<b>Skilled labourers</b>			
VET Courses Cert II and III (entry level to supervisors)	<ul style="list-style-type: none"> <li>• Machine operators</li> <li>• Solar panel installers</li> </ul>	<ul style="list-style-type: none"> <li>• Insulation installers</li> </ul>	<ul style="list-style-type: none"> <li>• Machine operators</li> </ul>
<b>Drafters</b>			
Traineeship (usually Cert II or III)	<ul style="list-style-type: none"> <li>• Civil engineering draftspersons</li> <li>• Electrical engineering draftspersons</li> <li>• Mechanical engineering draftspersons</li> <li>• Architectural and building draftspersons</li> </ul>	<ul style="list-style-type: none"> <li>• Electrical engineering draftspersons</li> <li>• Mechanical engineering draftspersons</li> <li>• Architectural and building draftspersons</li> </ul>	<ul style="list-style-type: none"> <li>• Civil engineering draftspersons</li> </ul>
<b>Technicians (built environment)</b>			
Apprenticeship (usually Cert III)	<ul style="list-style-type: none"> <li>• Wind turbine technicians</li> <li>• Solar and battery technicians</li> <li>• Chemical, gas, petroleum and power generation plant operators</li> </ul>	<ul style="list-style-type: none"> <li>• Refrigeration technicians</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

Pathway	Clean energy	Energy efficiency	Nature positive
<b>Land management and restoration</b>			
VET Courses Cert II and III (entry level to supervisors)	<ul style="list-style-type: none"> <li>• Rangers</li> <li>• Cultural heritage monitors</li> <li>• Bush regenerator</li> <li>• Conservation field officer</li> <li>• Environmental technician</li> <li>• Land management assistant</li> <li>• Nursery technician</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• Rangers</li> <li>• Cultural heritage monitors</li> <li>• Bush regenerator</li> <li>• Conservation field officer</li> <li>• Environmental technician</li> <li>• Land management assistant</li> <li>• Nursery technician</li> </ul>
Traineeship (usually Cert II or III)	<ul style="list-style-type: none"> <li>• Vegetation manager for solar/wind sites</li> <li>• Carbon farming technician or offset land management technician</li> <li>• Environmental field assistant</li> </ul>	<ul style="list-style-type: none"> <li>• Urban greening technician</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation field officer</li> <li>• Bush regenerator</li> <li>• Fire management crew</li> <li>• Carbon farming technician</li> <li>• Indigenous ranger assistant</li> </ul>
Apprenticeship (usually Cert III)	<ul style="list-style-type: none"> <li>• Nursery worker – carbon planting</li> </ul>	<ul style="list-style-type: none"> <li>• Landscape apprentice</li> <li>• Irrigation technician</li> <li>• Horticulturalist</li> <li>• Arborist</li> </ul>	<ul style="list-style-type: none"> <li>• Horticulturalist (amenity)</li> <li>• Nursery assistant</li> <li>• Tree worker/arborist</li> <li>• Urban greening technician</li> <li>• Landscape apprentice</li> </ul>
VET Courses Cert IV Diploma/ advanced diploma (Senior supervisor and manager level)	<ul style="list-style-type: none"> <li>• Environmental consultant</li> <li>• Carbon farming technician</li> <li>• Vegetation manager</li> </ul>	<ul style="list-style-type: none"> <li>• Horticulturist</li> <li>• Landscape designer</li> <li>• Environmental consultant</li> </ul>	<ul style="list-style-type: none"> <li>• Landcare manager</li> <li>• Natural resource manager</li> <li>• Indigenous land manager</li> <li>• Conservation officer</li> <li>• Bushland regenerator</li> <li>• Park ranger</li> <li>• Land management unit supervisor</li> <li>• Environmental field technician</li> <li>• Environmental consultant*</li> <li>• Natural resource management officer</li> <li>• Biodiversity project officer*</li> <li>• Fire ecologist*</li> <li>• Catchment management officer</li> <li>• Weed &amp; pest management technician</li> <li>• Revegetation coordinator</li> <li>• Horticulturist</li> <li>• Urban greening specialist</li> <li>• Landscape gardener</li> <li>• Nursery manager</li> <li>• Turf manager</li> <li>• Arborist</li> </ul>

\* may also have a bachelor degree



Pathway	Clean energy	Energy efficiency	Nature positive
<b>Trades</b>			
Apprenticeship (usually Cert III)	<ul style="list-style-type: none"> <li>• Motor mechanics</li> <li>• Electricians</li> <li>• Automotive electricians</li> <li>• Electrical trades workers</li> <li>• Telecommunications trades workers</li> <li>• Electrical distribution trades workers</li> <li>• Marine transport professionals</li> <li>• Structural steel and welding trades workers</li> <li>• Metal fitters and machinists</li> </ul>	<ul style="list-style-type: none"> <li>• Motor mechanics</li> <li>• Electricians</li> <li>• Electrical/electronic trades workers</li> <li>• Plumbers</li> </ul>	<ul style="list-style-type: none"> <li>• Motor mechanics</li> </ul>
<b>Surveying</b>			
VET Courses Cert IV Diploma/ advanced diploma (Senior supervisor and manager level)	<ul style="list-style-type: none"> <li>• Surveyors</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• Surveyors</li> </ul>

# Tertiary careers





Do you want to go to university? A tertiary degree can open up a range of other job opportunities and career pathways, many that you may not be familiar with. The following careers generally require a university degree but there can be alternative pathways, especially into management roles.

## Professionals

Role	Clean energy	Energy efficiency	Nature positive
<b>Planners and architects</b>	<ul style="list-style-type: none"> <li>• Urban and regional planners</li> </ul>	<ul style="list-style-type: none"> <li>• Architects and landscape architects</li> </ul>	<ul style="list-style-type: none"> <li>• Urban and regional planners</li> <li>• Architects and landscape architects</li> </ul>
<b>Educators</b>	<ul style="list-style-type: none"> <li>• University lecturers and tutors</li> <li>• Vocational education teachers</li> </ul>	<ul style="list-style-type: none"> <li>• Vocational education teachers</li> </ul>	<ul style="list-style-type: none"> <li>• University lecturers and tutors</li> </ul>
<b>Scientists</b>	<ul style="list-style-type: none"> <li>• Environmental scientists</li> <li>• Geologists, geophysicists and hydrogeologists</li> <li>• Ecologists</li> <li>• Research and development</li> </ul>	<ul style="list-style-type: none"> <li>• Research and development</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental scientists</li> <li>• Geologists, geophysicists and hydrogeologists</li> <li>• Agricultural, fisheries and forestry scientists</li> <li>• Ecologists</li> <li>• Research and development</li> </ul>
<b>Engineers</b>	<ul style="list-style-type: none"> <li>• Electrical engineers</li> <li>• Industrial, mechanical and production engineers</li> <li>• Chemical engineers</li> <li>• Mining engineers</li> <li>• Civil engineering</li> <li>• Chemical and materials engineers</li> <li>• Chemical engineers</li> <li>• Environmental engineers</li> </ul>	<ul style="list-style-type: none"> <li>• Electrical engineers</li> <li>• Industrial, mechanical and production engineers</li> <li>• Chemical and materials engineers</li> </ul>	<ul style="list-style-type: none"> <li>• Civil engineering</li> <li>• Chemical and materials engineers</li> <li>• Other engineering professionals</li> <li>• Environmental engineers</li> </ul>
<b>Managers</b>	<ul style="list-style-type: none"> <li>• Construction managers</li> <li>• Project managers</li> <li>• Engineering managers</li> <li>• Production managers</li> <li>• Policy and planning managers</li> <li>• Research and development managers</li> </ul>	<ul style="list-style-type: none"> <li>• Construction managers</li> <li>• Policy and planning managers</li> <li>• Research and development managers</li> </ul>	<ul style="list-style-type: none"> <li>• Policy and planning managers</li> <li>• Research and development managers</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• Occupation and environmental health professionals managers</li> </ul>	<ul style="list-style-type: none"> <li>• Occupation and environmental health professionals managers</li> </ul>	<ul style="list-style-type: none"> <li>• Occupation and environmental health professionals managers</li> </ul>

# Training spotlight: apprenticeships



# What is an apprenticeship?

An apprenticeship combines on-the-job training with classroom instruction, allowing you to earn while you learn in various trades such as plumbing, electrical work, carpentry and more.

## Benefits of an apprenticeship

- Earn while you learn: Apprentices receive a wage while gaining practical experience and hands-on training.
- You will gain industry-recognised qualifications.
- You can build a network of contacts in your chosen field.
- Trade qualifications are in high demand, with strong predicted growth for the future and good salaries.
- Employers all over Australia hold apprenticeships and traineeships in high regard.
- You can study full time or part time.
- You will receive full benefits while you study, such as sick leave and holiday pay.
- Apprenticeships are available for anyone who had completed Year 10.

If you want to find out more information about a certain qualification and the career options that a type of qualification offers, you can start a search on the [Your Career website](#).

## Starting an apprenticeship

### Find the trade you're interested in

First, you need to know what trade you are interested in by doing some research and talking to anyone you know in that job. Sometimes it can be hard for mob to find people working in areas they want to know more about (especially if you live in a small remote town), so online resources can be very useful.

Here are some things you can do to learn more about different trades:

- If your school requires a job placement or work experience, make the most of the opportunity and aim to find something you are really interested in rather than taking the easiest option.
- Check out our Net Zero Storybook about First Nations people working in different decarbonisation jobs.
- Complete a pre-apprenticeship course to learn more about a job and get ready for an opportunity at the same time.

### Find an apprenticeship

- Search online: Sometimes apprenticeships opportunities are advertised via job search websites.
- Visit your local employment centre or Workforce Australia provider to ask about opportunities and get help with pre-employment training.
- Reach out to businesses in your chosen trade and see if they would consider taking you on as an apprentice. There are many government incentives that encourage employers to train apprentices.



# Getting training and employment support

## Local support services

Workforce Australia providers play a crucial role in connecting jobseekers with employment and training opportunities. They offer services such as job placement, skills training and career counselling to help people secure meaningful employment.

Find your local provider on the [Workforce Australia website](#).

## Finding a registered training organisation

Registered training organisations (RTOs) are licensed to provide vocational education and training (VET) across Australia. RTOs include:

- TAFE colleges and institutes
- adult and community education providers
- community organisations
- schools and higher education institutions
- commercial and enterprise training providers
- industry bodies
- other organisations that meet registration requirements.

RTOs that deliver training to apprentices and trainees are known as supervising registered training organisations.

Find your closest RTOs or RTOs offering your preferred course by using location or qualifications in the search bar at [training.gov.au](https://training.gov.au).

## Apprenticeship assistance program – New Energy Apprenticeships Program

The New Energy Apprenticeships Program provides incentives to encourage more people into sectors playing a key role in the transition to a net zero economy.

As a New Energy Apprentice, you may be eligible to receive:

- up to \$10,000 in payments on top of your wage (it's not a loan)
- access to tailored support services to help you through your apprenticeship.

The support is available for apprenticeships that build skills needed in the clean energy industry. Hundreds of clean energy related apprenticeships are identified on the priority apprenticeships for list. Visit [The Department of Employment and Workplace Relations website](#).

## Scholarships

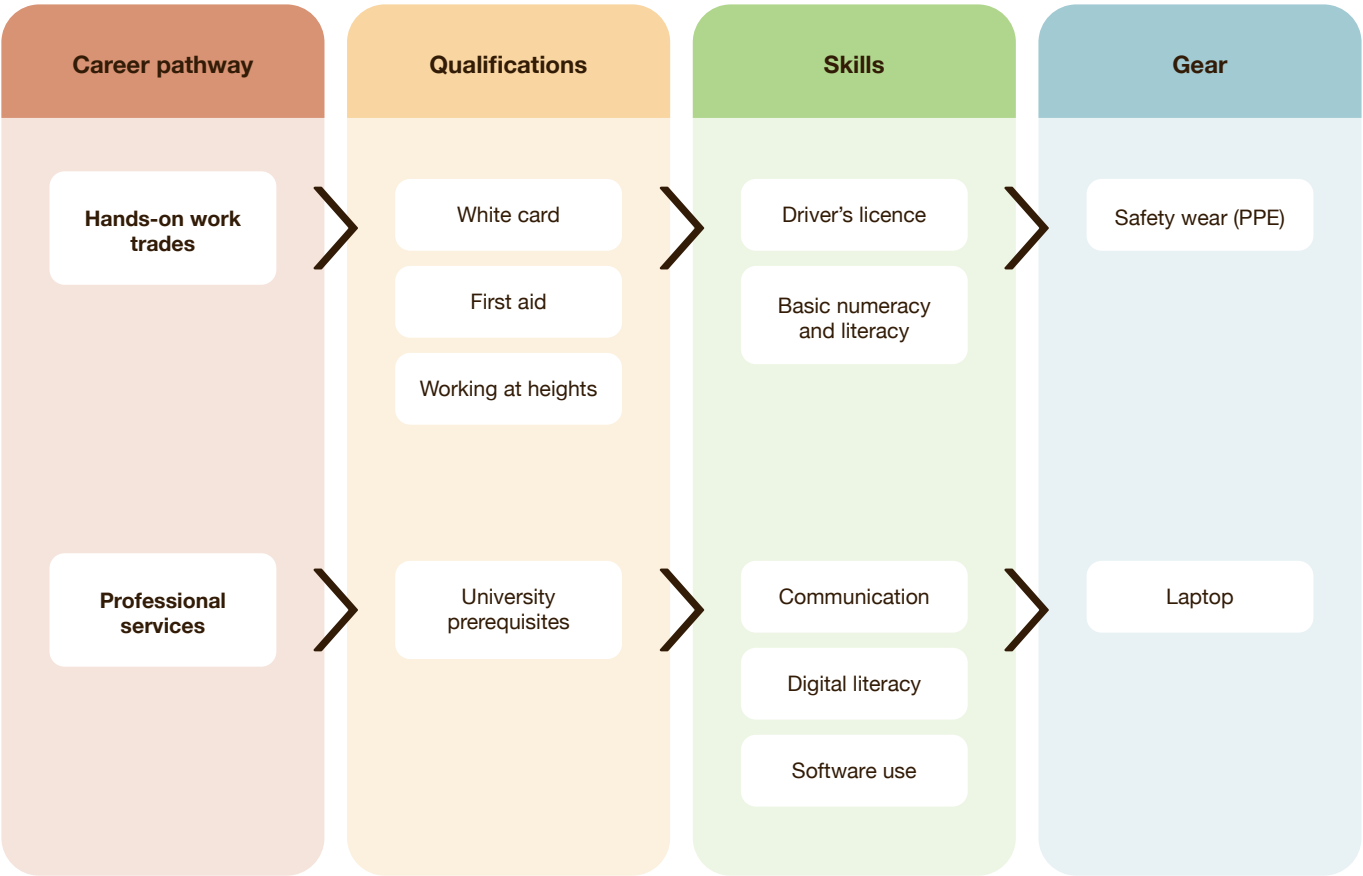
Scholarships are available to Indigenous high school students to support them to stay in school or attend a boarding school. A list of these opportunities are on the [Aurora Education Foundation website](#).

Many universities also offer scholarships to support students to overcome financial constraints. Tips can be found on the same Indigenous Pathways Portal.

# Getting ready for work

## Building job skills

You can start preparing for training and employment opportunities by working on the general skills and requirements for the type of work you are most interested in. The below graphic gives suggestions for where to focus, depending on your likely career pathway.





## Literacy and numeracy

Most pre-apprenticeship programs will start by assessing your reading, writing and maths skills. If you need to improve any of these skills before beginning an apprenticeship, the training organisation will help you find courses designed to build these skills first.

If you want to get started working on these yourself, you can contact:

### **Skills for Education and Employment (SEE) Program**

Available across Australia for school leavers over the age of 15 years needing help with their language, literacy, numeracy and digital skills. Search for providers of the general program on the [The Department of Employment and Workplace Relations website](#).

### **First Nations providers**

Can be found under the Approved Grants section on the [The Department of Employment and Workplace Relations website](#).

### **Literacy for Life Foundation**

This Aboriginal-run charity trains Aboriginal people to bring literacy to their communities. Find out more on the [Literacy for Life Foundation website](#).

### **The Australian Literacy & Numeracy Foundation**

You can request a literacy and numeracy training pack for primary school or high school levels on the [ALNF website](#).

## Résumés

To begin applying for an internship, job or training opportunity you will need a résumé (also known as a CV). You can find lots of free résumé templates online, and some are even loaded into Microsoft Word. If you want some in-person help, visit your nearest Workforce Australia provider or employment service (see how to find Workforce Australia providers later in this guide).

The most successful job applications also include a cover letter that you have written specifically for the job you are applying for, but you can create a general template to adapt for each application.



## Finding your first, or next job

Ready to work? Here are some resources to help get you off the ground and onto a career path.

### CSIRO's Indigenous Jobs Map

This [interactive online map](#) allows you to quickly see where the most opportunities are in Australia for positions that are identified for First Nations people or where First Nations people are encouraged to apply. Narrow the search by qualification level, sector and educational background.

### Career trackers

The Career Trackers High School Program recruits students in years 9 to 12 and provides participants with training, coaching and exposure to pathways into higher education and professional employment.

The final stage of the program is an internship that provides Year 12 students interested in a degree of STEM (science, technology, engineering and mathematics), business or law with 4 weeks of paid employment, leadership development and access to a network of First Nations role models prior to arriving on campus for the first day of university. Find out more on the [Career Trackers website](#).

### Aurora Education Foundation

The Indigenous Pathways Portal lists [scholarships](#) and [internship program](#) opportunities for Aboriginal and Torres Strait Islander students at all stages of study (high school through to university graduate).

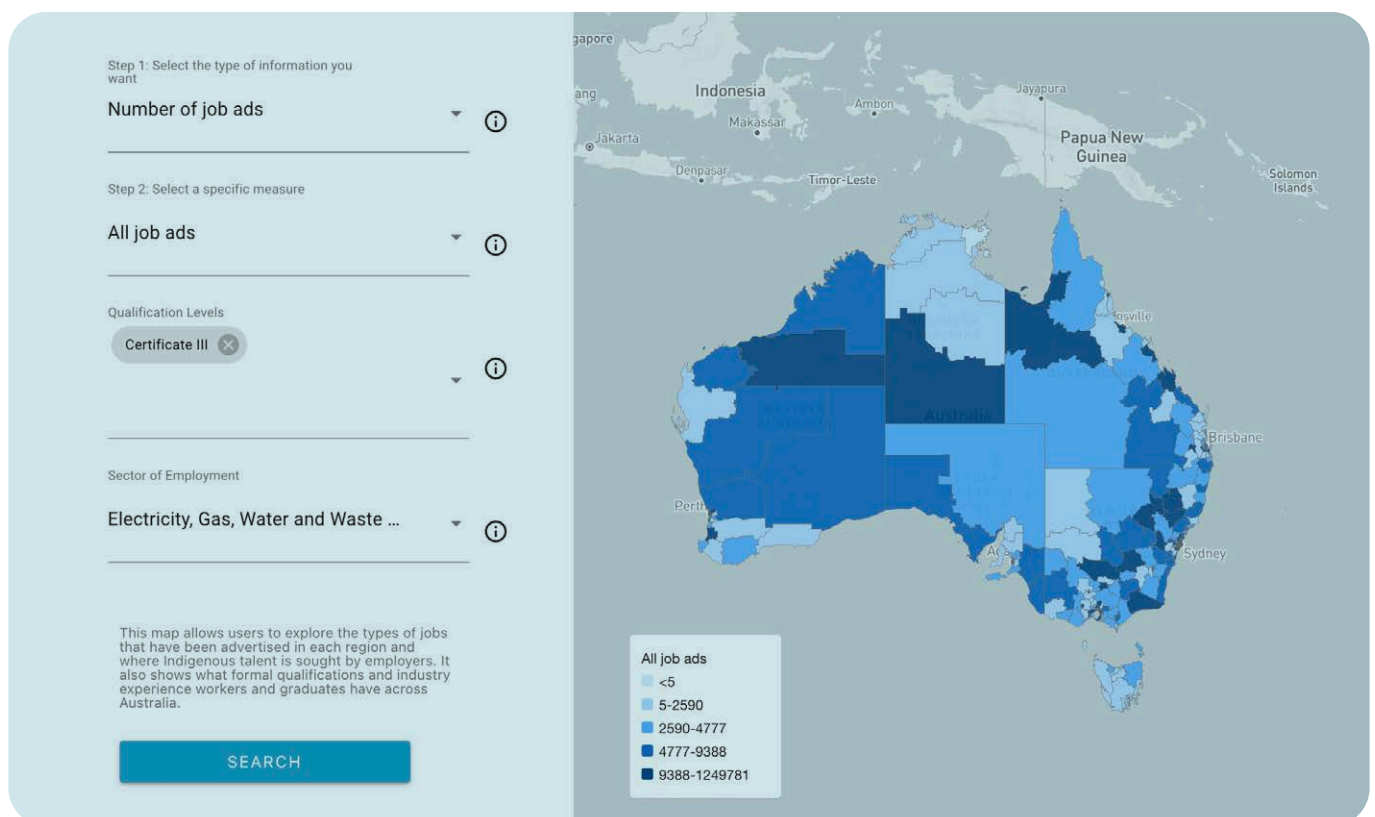


Figure 12: CSIRO Indigenous Job Map.

