



**SOLAR & GENERAL  
MECHANICAL SERVICES**

**First Nations  
Business Resources**

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### Acknowledgement of Country

Powering Australia wishes to acknowledge the First Nations peoples of Australia and recognise their enduring connection to Country through culture, people, place and story. We honour the knowledge systems that have sustained these lands and waters for thousands of generations and recognise the vital role of First Nations leadership and self-determination in shaping a just and sustainable future. As Australia undergoes a significant clean energy and industrial transition, we acknowledge the importance of respectful partnership, cultural integrity, and shared purpose to realise the full opportunity of the clean energy transition.



## Business opportunities in solar and general mechanical services

### Starting your business journey

First Nations businesses are stepping into one of the biggest economic shifts Australia has seen and the opportunity is real, immediate, and growing rapidly.

As the clean energy transition accelerates, there's a clear window to move early and position your business for sustained success. With the right insight and forward planning, you can secure a leading business role in projects that will shape regions and communities for decades to come.

It starts by pinpointing where you fit across renewable energy projects and the supply chains that support them. From there, it's about understanding what work is coming, what's required and when it's happening. The businesses that achieve sustained success are the ones preparing early, investing in the right equipment, forming strong partnerships and aligning with projects before they hit the ground.

This resource is built to help you do exactly that. It cuts through the noise to highlight real opportunities, break down the work involved, and give you a clear direction in beginning a sustainable business on Country.

“The businesses that achieve sustained success are the ones preparing early, **investing in the right equipment, and aligning with projects before they hit the ground.**”

### Your practical guide

**This resource cuts through the noise.** Real opportunities. The work involved. A clear direction to build a sustainable business on Country.

### What are solar and general mechanical services?

Solar and general mechanical services cover a range of hands on assembly, installation and mechanical work needed during the construction and maintenance of renewable energy systems (wind and solar). This includes racking assembly, tracker installation, assembling mechanical parts, solar panel mounting and supporting electricians/civil teams on site.

These services play a crucial role in both the construction and operation stages of Renewable energy development. More solar and mechanical services will be needed as renewable energy projects are being built across Australia. For First Nations businesses, here is a great opportunity to be part of the energy transition and create local jobs on Country.

### Why it matters

This is where solar projects come to life, on the ground. Solar and mechanical services cover the hands on work behind solar builds, from racking and tracker installation to assembly, panel mounting and supporting site crews.

It's practical and high demand work needed on every solar project. The skills and tools required for this work may also align with existing capability regional businesses may already possess adding another economic pathway for regional businesses.

These projects create real jobs, skills and business opportunities for people on Country. Local workers and businesses are key to getting projects built, creating a pathway to long term economic growth, strong local leadership and ongoing care for Country as the clean energy transition accelerates.





## Renewable energy project life cycle

From idea to impact, business opportunities exist across all stages, both direct and indirect:

01



### Development

(Years 0-4)

Site selection, planning, approvals, and securing funding

02



### Construction

(Years 2-4)

Building and installing infrastructure

03



### Operations & maintenance

(Years 4-6 onward)

Generating electricity and ongoing maintenance

04



### Decommissioning

(Years 29-30)

Removing equipment and restoring the land

## Understanding the industry structure

Developer > EPC Contractor > Subcontractors > Mechanical Crews

Some First Nations businesses enter by subcontracting or forming joint ventures with majority ownership and controlling rights.

## Identifying the opportunity and what's coming next

It is important to build relationships with project developers and Traditional Owners who may require land management and environmental services where renewable energy projects will be located. Both services are required from the beginning and throughout the renewable project lifecycle, so it is imperative to build those relationships as soon as possible.

A wave of renewable new projects across Australia are being developed and with it comes a surge of new business opportunities. In starting your own enterprise, it is essential to start by mapping future and current renewable generation projects across your region and engaging with the proponents (the project developer) to understand the need for your services. Quite often proponents will have information sessions for procurement opportunities or they may have a register on their website for business to lodge and expression of interest. You can find details of new projects with your local council or via web based public registers of renewable energy projects in each state and territory.

Key opportunities across each project phase include:



- **Development:** environmental desktop studies and site screening, field surveys, environmental studies and assessments, impact assessments, and preparation of approval documentation and reports.
- **Construction:** on-site environmental supervision, weed, pest and erosion control, site management and compliance monitoring, including progressive rehabilitation works.
- **Operations & Maintenance:** routine inspections, environmental monitoring, compliance and reporting, and vegetation and land management (including access tracks, easements, and buffer areas).
- **Decommissioning & Rehabilitation:** site rehabilitation, revegetation and land restoration works, environmental closure reporting, and delivery of land return for future land use. Excellent business opportunities exist for First Nations people, as strong on-Country knowledge, land-care skills, and environmental expertise can be utilised across all phases of renewable energy projects.





## Leading business opportunities on Country

This resource outlines the key mechanical services for solar renewable generation projects. These essential mechanical services create strong opportunities for First Nations businesses to lead and grow in solar energy infrastructure services. Projects require local capability across assembly, foundation and mounting system installation, electrical testing, transport and logistics and mechanical/fabrication services. By targeting these activities, First Nations businesses can secure ongoing contracts, build skilled on-Country workforces and play a leading role in Australia's clean energy economy.

Business segment	Description
<b>Solar panel installation and mounting services (racking and trackers assembly)</b> 	Assembly and installation of solar panel mounting systems, including fixe/tilt racking and single or dual-axis tracker structures. Works include layout: <ul style="list-style-type: none"> <li>• Mechanical fastening</li> <li>• Torquing</li> <li>• Alignment</li> <li>• Panel mounting preparation</li> <li>• Coordination with electrical teams to ensure systems are installed to engineering specifications and tolerance requirements</li> </ul>
<b>Mechanical assembly services</b> 	Mechanical assembly of prefabricated components such as frames, brackets, supports, enclosures, skids, and balance-of-plant equipment. Activities include: <ul style="list-style-type: none"> <li>• Bolting</li> <li>• Fastening</li> <li>• Alignment</li> <li>• Torque verification</li> <li>• Quality checks and integration with civil and electrical works on site</li> </ul>




Business segment	Description
<b>Tracker system maintenance</b> 	Ongoing inspection, servicing, adjustment and maintenance of solar tracking systems to ensure optimal performance and reliability. Includes: <ul style="list-style-type: none"> <li>• Lubrication</li> <li>• Actuator and motor checks</li> <li>• Sensor calibration</li> <li>• Replacement of worn components</li> <li>• Fault identification</li> <li>• Coordination with monitoring systems</li> </ul>
<b>Solar cleaning and vegetation management</b> 	Cleaning of solar panels to maintain energy yield and management of vegetation around solar arrays to prevent shading, fire risk, and access issues. Activities include: <ul style="list-style-type: none"> <li>• Manual or automated cleaning</li> <li>• Mowing</li> <li>• Slashing</li> <li>• Weed control</li> <li>• Erosion management</li> <li>• Environmental monitoring</li> </ul>
<b>Mechanical repairs &amp; workshop services on Country</b> 	Provision of mechanical repair, fabrication, and maintenance services delivered regionally or onsite to support solar and energy infrastructure. Includes: <ul style="list-style-type: none"> <li>• Servicing tools and equipment</li> <li>• Repairing structural components</li> <li>• Welding</li> <li>• Fabrication</li> <li>• Preventative maintenance</li> <li>• Rapid-response breakdown support</li> </ul>

Table 1: What's involved in Solar & General Mechanical Services



## Training and skills for success

Building a successful business starts with knowing what is required to deliver on the ground. That means understanding the skills and training required to operate a successful business. Below are examples of some of the qualifications, training and experience needed for solar and general mechanical services.

### Solar panel installation and mounting services (racking and trackers assembly)

#### Training/qualifications needed:

- White Card
- Solar installer qualification (TAFE Cert III in Electrotechnology)
- Working at Heights
- First Aid, Manufacturer training (Trina, Longi, Sungrow, etc.)

#### Useful job experience/skills that fit this business:

- Construction
- Mechanical assembly
- Electrical assist labour
- Solar install experience



### Mechanical assembly services

#### Training/qualifications needed:

- White Card
- Machinery tickets (crane, Elevated Work Platform (EPW), forklift)
- Torque tool training
- Working at Heights

#### Useful job experience/skills that fit this business:

- Mechanical assembly
- Metalwork
- Mining maintenance



### Tracker system maintenance

#### Training/qualifications needed:

- White Card
- Basic mechanical trade
- First Aid
- Fault-finding

#### Useful job experience/skills that fit this business:

- Mechanical fitting
- Maintenance
- Inspections
- Asset checks



### Solar cleaning and vegetation management

#### Training/qualifications needed:

- White Card
- Working at Heights (if applicable)
- Machinery tickets (tractor/ride-on)
- WHS

#### Useful job experience/skills that fit this business:

- Grounds maintenance
- Cleaning
- Vegetation clearing



### Mechanical repairs & workshop services on Country

#### Training/qualifications needed:

- Trade certificate (mechanical fitter, boilermaker)
- First Aid
- WHS

#### Useful job experience/skills that fit this business:

- Repairing machinery
- Welding
- Fabrication



## Major equipment needed

The businesses that get ahead are the ones that prepare early, matching capability to opportunity and setting themselves up to deliver with confidence.

This is an indicative list of equipment you will need to start your business for the relevant "Business Activity". Equipment costs for clean-technology businesses can vary significantly across Australia due to factors such as transport and freight distances, regional supply availability, import costs, and differences in local labour, installation, and compliance requirements.

The equipment list in this resource represents items typically needed but this may differ depending on region, availability and specific sector needs.

01

### Solar panel installation & mounting services (racking & trackers assembly)

Essential basic entry-level tools and equipment

Laser shaft alignment tool

Codeless nut runners

Telehandlers

Forklifts

Lifting gear

02

### Mechanical assembly services

Essential basic entry-level tools & equipment

UTE /van

Crane truck

Skid steers

Lifting gear

Telehandlers

Codeless nut runners

Laser shaft alignment tool

Telescopic booms

Hydraulic torque systems

03

### Solar cleaning & vegetation management

Remote-controlled panel cleaning robots

Manual solar panel cleaning tools

Trailer-mounted pressure washer

Ground maintenance hand tools

Ride-on mowers

Tractor-mounted solar panel cleaner

Water trucks

Tractors

Mulchers

04

### Mechanical repairs & workshop services on Country

Workbench, tool storage & machines

Screw air compressors

Welding equipment

Pneumatic tools

Bearing service tools

UTE /van

Lifting gear (Hoist, Crane Jib)

Power tools

05

### Tracker System Maintenance

Diagnostic tools

Essential basic entry-level tools & equipment

UTE /van

Lifting gear

\*Equipment use in Solar farm

\*\*Equipment use in Wind farm

## Discover trusted guidance and support to turn your ideas into opportunities on Country

You don't have to start from scratch. A strong network of support is ready to help you turn ideas into real business outcomes.

### WHERE TO START

- First Nations business Hubs and Chambers
- First Nations Business Directories
- Industry Networks
- Training Providers
- Government Business Support Programs

### FINANCE AND BUSINESS PLANNING

- Indigenous Business Australia – finance and business planning support
- Australian Government Business Portal – online hub for business support and information
- Local Business Development Commission – provides business support (e.g. Small Business Development Corporation in WA)
- Local Investments Funding Grant – local grant investment
- Grant Connect – provides information about Australian grant opportunities
- Clean Energy Finance Corporation – clean-tech project investment
- National Indigenous Australian Agency – provides information on Indigenous business development grants and regional economic programs
- Northern Australia Infrastructure Facility (NAIF) – supports First Nations communities with finance to build and take part in renewable energy and local infrastructure projects

### NETWORKS AND PROCUREMENT

- NIAA Indigenous Procurement Policy – government tender opportunities
- AusTender – Federal Government tender website
- Supply Nation – national procurement networks and business opportunities
- Local Aboriginal Business Directory – connects and promotes Aboriginal-owned businesses across Australia

### REGULATION AND INNOVATION

- State and National Environmental Regulation – for waste licensing and compliance requirements

### PROJECT MAPPING

- Clean Energy Regulator – Large-scale renewable energy data – federal site with data on approved, committed and probable large-scale renewable energy projects across Australia
- Renew Economy Project Maps – interactive maps of Australia's [large-scale solar](#), wind and BESS farms; identifies future construction opportunities

Key terms	Definitions
Balance-of-Plant (BOP)	All the supporting equipment and infrastructure on a solar farm that is not the solar panels themselves – including wiring, inverters, switchgear, mounting structures, fencing and civil works. Mechanical assembly teams often work on BOP components.
Dual-Axis Tracker	A solar panel mounting system that moves on two axes (horizontal and vertical) to follow the sun's path throughout the day and across seasons, maximising energy generation. More complex to install and maintain than fixed-tilt systems.
EPC Contractor	Engineering, Procurement and Construction contractor. The company engaged to design, source materials for and build a renewable energy project from start to finish. First Nations subcontractors often work under an EPC contractor.
Expression of Interest (EOI)	A preliminary submission made by a business to register its interest in providing services for an upcoming project or contract. Often the first step in a procurement process before a full tender is released.
Fixed-Tilt Racking	A solar panel mounting system where panels are set at a fixed angle and do not move. Simpler and lower-cost than tracker systems, but generates less energy as the sun moves across the sky.
Inverter	A device that converts the direct current (DC) electricity generated by solar panels into alternating current (AC) electricity that can be used on-site or fed into the electricity grid.
Joint Venture	A business arrangement where two or more companies collaborate on a specific project or contract, sharing resources, risks and profits. A common way for First Nations businesses to enter new markets by partnering with established contractors.
Preventative Maintenance	Scheduled servicing and inspection of equipment carried out on a regular basis to prevent breakdowns and extend the working life of components. Tracker systems and mechanical equipment on solar farms require ongoing preventative maintenance.
Procurement	The formal process of sourcing and contracting goods or services for a project. Large renewable energy projects typically require suppliers and subcontractors to go through a structured procurement process.
Proponent	The organisation responsible for proposing, funding and delivering a renewable energy project. Also referred to as the project developer or project owner.
Racking	The structural framework used to mount and secure solar panels in position on the ground or on a roof. Racking systems must be precisely assembled and aligned to engineering specifications.
Single-Axis Tracker	A solar panel mounting system that rotates on a single horizontal axis to follow the sun from east to west throughout the day. More common than dual-axis systems on large solar farms, offering a good balance of energy output and cost.
Subcontractor	A business engaged by a principal contractor (such as an EPC contractor) to carry out a specific portion of work on a project. Many First Nations businesses enter the renewable energy sector as subcontractors before growing into larger roles.
Telehandler	A versatile piece of machinery with an extendable boom arm used to lift and position heavy materials on construction sites. Commonly used during solar panel and racking installation.
Torque Verification	The process of checking that bolts and fasteners have been tightened to the correct tension as specified by engineering requirements. Critical in solar racking and mechanical assembly to ensure structural safety and performance.
Tracker System	A motorised mounting system that moves solar panels to follow the sun's position throughout the day, improving energy output compared to fixed-tilt systems. Requires specialist installation, calibration and ongoing maintenance.
White Card	A nationally recognised construction induction certificate (formally called the General Construction Induction Card) that is required before any person can work on a construction site in Australia.
WHS (Work Health and Safety)	The legal framework and practices that protect the health, safety and wellbeing of workers and others on construction and maintenance sites. All businesses working on renewable energy projects must comply with applicable WHS legislation.

Table 2: Key terms & definitions



POWERING  
AUSTRALIA