

Transition Opportunities: Coal to Offshore Wind



EnergyAustralia
LIGHT THE WAY

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Acknowledgment of Traditional Owners

We acknowledge and respect Traditional Owners as the original custodians of the land and waters. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices. We are committed to working in partnership with First Nations people.

We would like to thank our project partners listed below.



EnergyAustralia
LIGHT THE WAY



Executive summary

Australia is going through a once in a lifetime transition to renewable energy, as new energy sources continue to come online and traditional fossil fuel-based industries start to decline. The offshore wind industry will play a major part in this transition, alongside onshore wind, solar, hydrogen and battery energy storage.

The Gippsland region has been home to Victoria's coal mining and power generation for over 100 years. At its peak, the region is estimated to have supplied over 90% of the state's electricity. However, in the next 15-20 years, an anticipated 5GW of coal generation in the region will close.

With strong offshore wind resources, local transmission infrastructure, an experienced supply chain, and a rich history of power generation, the Gippsland region is in an excellent position to transition into offshore wind. Gippsland is the first area to be declared by the Australian Federal Government as a region for offshore wind development and licence applications opened from January to April 2023. At the time of writing, licences for the region had not yet been announced, but are anticipated before the end of 2023.

EnergyAustralia's Yallourn Power station is one of several coal fired power stations in the region expected to close within the next 5-15 years, with an announced closure date of 2028. The more than 500 highly skilled Yallourn workforce is in a great position to transition to offshore wind, as a large percentage of the workforce is trade or skill based and used to working in highly industrialised work settings. With offshore wind projects in the region anticipated to start construction between 2026-2030, now is the time for this workforce to start considering their training and re-skilling pathways.

The case studies outlined in this document provide example pathways for the six different work groups identified by EnergyAustralia as making up half their workforce. Each work group has three different pathways mapped out to provide an example of how workers can upskill or retrain, to ensure they are work ready and highly employable as the offshore wind industry commences in the region.

Offshore wind projects are typically broken into three phases, with Development and Construction estimated to each take between 3-5 years and Operations and Maintenance to continue for 25 years or more.

The Gippsland region has excellent education and training institutions already in place to support the local transition. Where possible, TAFE Gippsland and Federation University have been recognised for re-training/upskilling pathways, followed by wider Gippsland region, Victoria and Australia-based centres. Providing local training in Gippsland is essential to support the region's transition, as there is strong evidence that students that study in local regions, remain in the regions.

The information provided in this guide is based on the most up-to-date and accurate information available at the time of writing and should in no way be viewed as definitive or final. Each offshore wind project will vary in requirements and job descriptions.

As Australia transitions to renewables, now is the perfect time to look at transition pathways into offshore wind. Gippsland's traditional power industry workforce is well placed to play a significant part in this exciting new power sector and to help ensure Victoria and wider Australia are well prepared for the nation's transition to Net Zero.

Each case study outlines

1. Job description of role identified by EnergyAustralia
2. Job description for offshore wind role (*job descriptions are based on examples from Star of the South's Offshore Wind Jobs Guide – www.starofthesouth.com.au/jobs-guide*)
3. A typical 'day in the life' of the offshore wind role
4. Local training
Please note course time frames are approximate and may vary between providers.
5. Estimated project length
6. Other potential offshore wind roles for each work group



Case studies

Boilermaker	8 Boilermaker to Blade Repair Technician 10 Boilermaker to Fabrication Supervisor 12 Boilermaker to Offshore Construction Welder
Engineer	14 Engineer to Project Engineer 16 Engineer to Project Manager - Grid/Transmission 18 Engineer to SCADA Engineer
Mechanical Fitter	20 Mechanical Fitter to Wind Turbine Technician 22 Mechanical Fitter to Mechanical/Hydraulics Technician 24 Mechanical Fitter to Trainee Marine Engineer
Mobile Plant Operator	26 Mobile Plant Operator to Deck cadet 28 Mobile Plant Operator to Onshore Crane Operator 30 Mobile Plant Operator to Warehouse/Storeperson
Power Worker	32 Power Worker to Deckhand Mate CTV Crew 34 Power Worker to Radio Operator 36 Power Worker to Trainee Integrated Rating
Unit Controller	38 Unit Controller to Control Room Technician 40 Unit Controller to Electrical Technician 42 Unit Controller to Installation Technician

Each case study outlines

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Job description
- 

Day in the life
- 

Training
- 

Project Length
- 

Other Pathways



Boilermaker to Blade Repair Technician

Boilermaker (Coal)



Recommended qualifications/certificates

- > Trade qualified boilermaker
- > Welding certification (inspector desirable)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Dangerous Goods training desirable
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > Construction industry white card desirable
- > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable

Required skills/experience

- > Experience providing boilermaking maintenance services on a power plant/equipment
- > Extensive welding experience
- > Ability to follow company policies, procedures, and safe work practices
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Ability to undertake emergency repairs on plant and equipment as required
- > Ability to work effectively as part of a team
- > Experience working in an industrialised setting
- > Capability to work a rotational, 24-hour roster
- > Leadership qualities with the ability to lead and mentor apprentices and other team members as required
- > Capability to use computerised work systems and software
- > Strong safety focus with ability to stop the job if unsafe

Blade Repair Technician (Wind)



Recommended qualifications/certificates

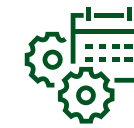
- > Trade qualification (desirable)
- > **Certificate III in Engineering (Composites Trade) - apprenticeship*** (recommended pathway)
- > GWO Basic Safety Training (BST) certification
- > E-Learning training for service lift model (turbine manufacturer specific)
- > IRATA Rope Access certification
- > OGUK Medical and Chester Step Test
- > MSIC Card
- > Provide Advanced First Aid Training.
- > High risk licence with Dogging (DG) and Rigging (RB) certifications
- > Construction industry white card (construction phase of project only)

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous experience heavy industry setting such as power in a technical role
- > Rope access/working at heights experience desirable
- > Electrical, hydraulics and mechanical understanding
- > 'Hands on' experience - capability to work on manual tasks in an industrialised setting and troubleshoot faults and repairs
- > Ability to manage risk by ensuring potential risks are identified, reported, and addressed
- > Ability to read, document and report on all work activities including testing and commissioning
- > Strong communication skills with the ability to work in a small team of 2-3 technicians
- > Capability to work with all stakeholder groups
- > Safety first attitude

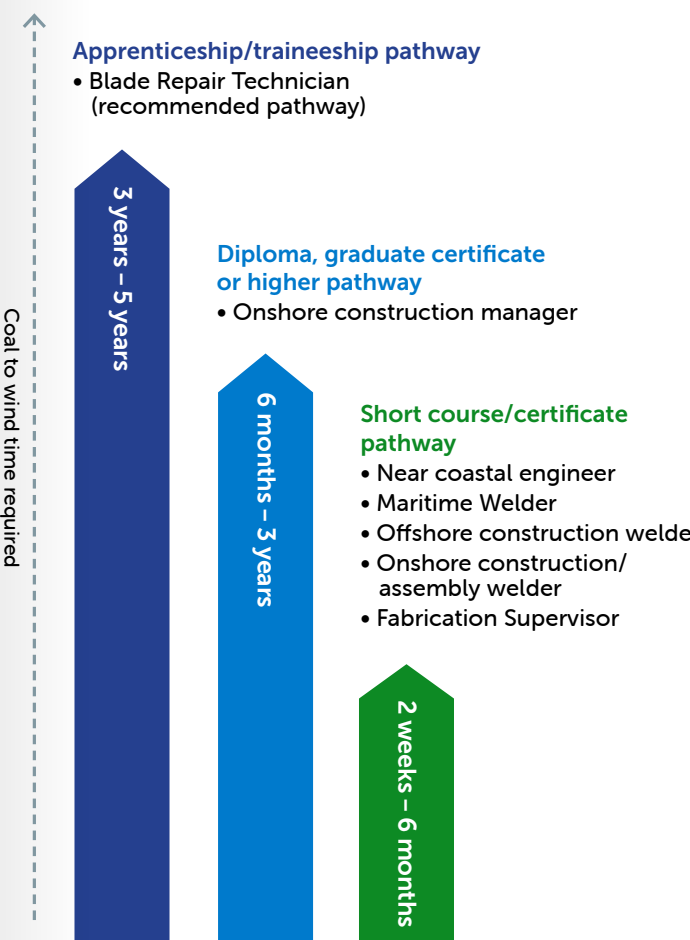
Day in the life of a Blade Repair Technician



A Blade Repair Technician works offshore on the wind turbine completing maintenance, repair and replacement work of the turbine parts including the blades and nacelles. Technicians must complete blade repair training as well as GWO wind turbine emergency training and rope access, working at heights training.

Each day, a Blade Repair Technician will arrive at the turbine via a service operation vessel (SOV) or crew transfer vessel (CTV) and board the turbine either directly from the vessel or via a gangway, rope or platform. The technicians work in a small group of 2-3 technicians and must bring their own lunch and toiletries to the facility. Blade Repair Technicians must enjoy working at heights, in isolated places and be willing to work at sea in varying (within reason) weather conditions. This position suits those with a great sense of adventure!

Other Boilermaker Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **GWO Blade Repair Training**
 - Federation University, Ballarat
 - Length: 3 years (apprenticeship)
- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **IRATA Rope Access Training**
 - Multiple providers across Victoria
 - Length: Approximately 5 days - dependent on level
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-5 days
 - multiple providers across Victoria
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours

Further training information can be found at training.gov.au



Project Length



Blade repair technicians are engaged for the Operations and Maintenance phase of an offshore wind project. This means that a Blade Repair Technician could work on one offshore wind farm for 25-30 years. Blade repair technicians may find that they work different hours and rosters in the high season (summer) to the low season (winter).



Boilermaker to Fabrication Supervisor

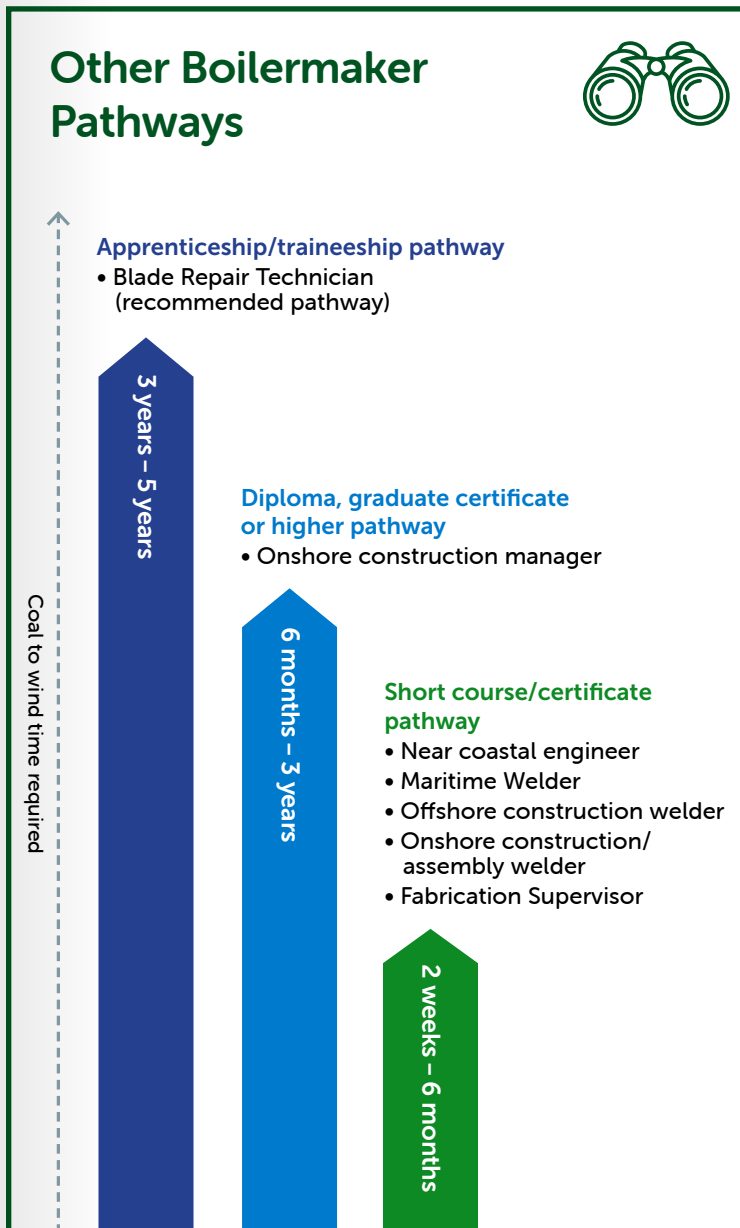
Boilermaker (Coal) 	Fabrication Supervisor (Wind) 
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualified boilermaker > Welding certification (inspector desirable) > Risk Assessment/JSA training certification > Confined Space certification > Dangerous Goods training desirable > Low Voltage rescue training with CPR certification > Firefighting certifications desirable > Construction industry white card desirable > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualified boilermaker/welder > Welding inspector certification* > Non-destructive testing (NDT) certification* > NACE Coating Inspector CIP-2 certification* > OGUK Medical and Chester Step Test > MSIC Card > Advanced First Aid Training > High risk licence with Forklift (LF) > Construction industry white card (construction phase of project only) <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Experience providing boilermaking maintenance services on a power plant/equipment. > Extensive welding experience > Ability to follow company policies, procedures and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Ability to undertake emergency repairs on plant and equipment as required > Ability to work effectively as part of a team > Experience working in an industrialised setting > Capability to work a rotational, 24-hour roster > Leadership qualities with the ability to lead and mentor apprentices and other team members as required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience in supervisory role, ideally in fabrication yard > Extensive welding experience > Electrical and electronics understanding > 'Hands on' experience - capability to work on manual tasks in an industrialised setting and troubleshoot faults and repairs > Ability to manage risk by ensuring potential risks are identified, reported and addressed > Ability to read, document and report on all work activities including testing and commissioning > Strong communication skills > Leadership qualities with the ability to lead and mentor apprentices and other team members as required > Capability to work with all stakeholder groups > Safety first attitude

Day in the life of a Fabrication Supervisor



The Fabrication Supervisor would be required for the construction phase of the offshore wind project. While pre-fabricated components will be required during the construction phase, tower construction would only occur if a construction facility is established locally.

Depending on the project, the Fabrication Supervisor would be engaged anywhere between 12 months and 3 years.



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Welding Inspector qualifications**
 - TAFE Gippsland
 - Length: 1 week to 3 months depending on how it is delivered
- **Non-Destructive Testing (NDT) Certification**
 - ATTAR AQB
 - LMATS
 - Length: 40-60 days depending on course and level
- **NACE Coating Inspector CIP-2 Certification**
 - Association for Materials Protection and Performance (AMPP)
 - Length: 5 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-3 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application

Further training information can be found at training.gov.au



Project Length



The Fabrication Supervisor would be required for the construction phase of the offshore wind project. Depending on the project, the Fabrication Supervisor would be engaged anywhere between 12 months and 3 years.



Boilermaker to Offshore Construction Welder

Boilermaker (COAL) 	Offshore Construction Welder (Wind) 
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualified boilermaker > Welding certification (inspector desirable) > Risk Assessment/JSA training certification > Confined Space certification > Dangerous Goods training desirable > Low Voltage rescue training with CPR certification > Firefighting certifications desirable > Construction industry white card desirable > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualified boilermaker/welder > BOSIET certificate > GWO Basic Safety Training (BST) certification* > E-Learning training for service lift model (turbine manufacturer specific) > IRATA Rope Access certification* > OGUK Medical and Chester Step Test > MSIC Card > Australian Passport > Advanced First Aid Training > Working at Heights certification > Construction industry white card (construction phase of project only) <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Experience providing boilermaking maintenance services on a power plant/equipment. > Extensive welding experience > Ability to follow company policies, procedures and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Ability to undertake emergency repairs on plant and equipment as required > Ability to work effectively as part of a team > Experience working in an industrialised setting > Capability to work a rotational, 24-hour roster > Leadership qualities with the ability to lead and mentor apprentices and other team members as required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience heavy industry setting such as power in a technical role > Rope access/working at heights experience desirable > Extensive welding experience > 'Hands on' experience - capability to work on manual tasks in an offshore setting and troubleshoot faults and repairs > Capability to work at sea in varying weather conditions > Ability to read, document and report on all work activities including testing and commissioning > Strong communication skills with the ability to work as part of a team > Capability to work with all stakeholder groups on offshore vessel > Ability to work a rotational roster > Safety first attitude

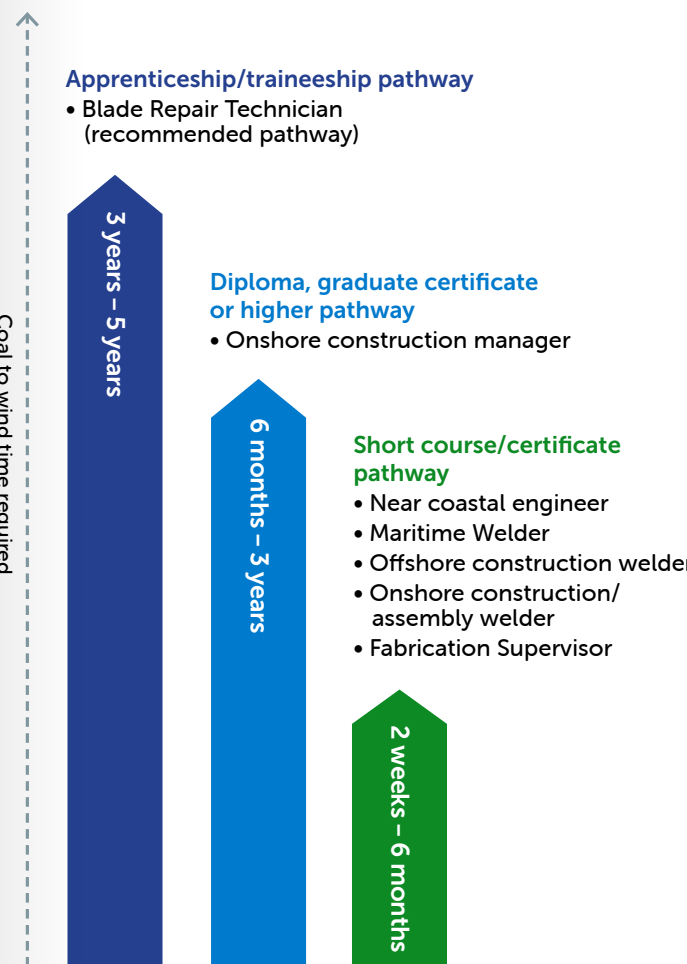
Day in the life of an Offshore Construction Welder



An Offshore Construction Welder will work offshore from a vessel such as a Service Operation Vessel (SOV), Wind Turbine Installation Vessel (WTIV), Accommodation Support Vessel (ASV), Construction Support Vessel (CSV) or Cable Lay Vessel (CLV) and complete welding duties for the construction phase to install the wind turbines and substation(s).

An offshore welder works a rotational roster which is an equal time roster of 4-5 weeks but will vary according to the project scope. A welder may also be required to mobilise or demobilise in a foreign port and/or complete project training overseas so must be available to travel internationally, if required for the work.

Other Boilermaker Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Basic Offshore Safety Induction and Emergency Training (BOSIET)**
 - ERGT Melbourne
 - Length: 3 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **IRATA Rope Access Training**
 - Multiple providers across Victoria
 - Length: Approximately 5 days - dependent on level
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **Working at Heights Certification**
 - Federation University
 - TAFE Gippsland
 - Length: 1-2 days

Further training information can be found at training.gov.au



Project Length




The Offshore Welder is engaged to work during the construction phase of the project for a specific scope. This means that the offshore welder may be required for several different scopes during that phase. The offshore welder would typically be required for construction scopes around 9-12 months per scope but would vary from project to project and scope to scope.



Engineer to Project Engineer

Engineer (Coal) 	Project Engineer (Wind) 
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant discipline > Working at Heights certification > Risk Assessment/JSA training certification > Confined Space certification > Low Voltage rescue training with CPR certification 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant field > Masters or post graduate study in specialist offshore wind or renewables sector highly desirable* > OGUK Medical and Chester Step Test > MSIC Card > Advanced First Aid Training > Construction industry white card (construction phase only) <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Extensive engineering experience working in power generation > Technical skill set including but not limited to engineering design, planning, environmental impact and operational analysis > Strong understanding of transmission sector > Ability to follow company policies, procedures and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Microsoft suite proficiency > Commercial acumen > Organisational skills with the ability to prioritise and adapt to changing deadlines > Ability to work effectively as part of a team > Capability to work a rotational, 24 hour roster if required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience heavy industry setting such as power as part of an engineering team > Previous experience working on a large infrastructure project working with various stakeholder groups to ensure project delivery > Baseline understanding of offshore wind including technology and processes > Strong understanding of transmission sector and associated technologies > Troubleshooting skills > Capability to work with SCADA systems for fault finding and remote operation > Commercial acumen > Strong communication skills and team player > Ability to travel offshore if required > Availability to work a rotational roster if required > Safety first attitude


Day in the life of Project Engineer



A Project Engineer will be tasked with working on a particular offshore wind project scope starting with the engineering design during the development of the project through to the installation and construction of the work. The Project Engineer must ensure that the project is delivered in a timely manner and meets all client and stakeholder requirements including meeting budgets and correcting any unforeseen issues or deficiencies.

The Project Engineer will work in an office-based location, on a Monday – Friday business hours basis but may be required to travel offshore and work on a rostered rotation at times during the project, if they are required on site.

Other Engineer Pathways



Diploma, graduate certificate or higher pathway

- Project Engineer
- SCADA Engineer
- Project Manager – Grid Transmission


Short course/certificate pathway

- Site Engineer
- Control Room Operator
- Technical Manager

Coal to wind time required

- 6 months – 3 years
- 2 weeks – 6 months

Training (Victoria)




Please note course timeframes are approximate and may vary between providers.

- **Post Graduate Studies in relevant field**
 - Multiple universities throughout Victoria
 - Length: 6 months – 10 years depending on the study
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application

Further training information can be found at training.gov.au



Project Length



A Project Engineer will generally be engaged during the development phase of the project and will remain during the construction phase. This means that this role would typically be required for at least 5-8 years but depending on the position, may also be required during the operations and maintenance phase.



Engineer to Project Manager – Grid/Transmission

Engineer (Coal) 	Project Manager – Grid/Transmission (Wind) 
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant discipline > Working at Heights certification > Risk Assessment/JSA training certification > Confined Space certification > Low Voltage rescue training with CPR certification 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant field > Masters or post graduate study in specialist field relating to grid integration technologies, electrical engineering or renewables sector highly desirable* > OGUK Medical and Chester Step Test > MSIC Card > Advanced First Aid Training > Construction industry white card <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Extensive engineering experience working in power generation > Technical skill set including but not limited to engineering design, planning, environmental impact and operational analysis > Strong understanding of transmission sector > Ability to follow company policies, procedures and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Microsoft suite proficiency > Commercial acumen > Organisational skills with the ability to prioritise and adapt to changing deadlines > Ability to work effectively as part of a team > Capability to work a rotational, 24 hour roster if required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience heavy industry setting such as power in a technical role > Previous experience in grid integration and power system planning for grid connections highly desirable > Mechanical aptitude with ability to repair mechanical, hydraulic, breaking and electrical systems of wind turbines > Strong understanding of transmission sector and associated technologies > Troubleshooting skills > Capability to work with SCADA systems for fault finding and remote operation > Technical skill set and able to read, document and report on transmission plans and technical studies > Strong communication skills and team player > Ability to travel offshore if required > Availability to work a rotational roster if required > Safety first attitude

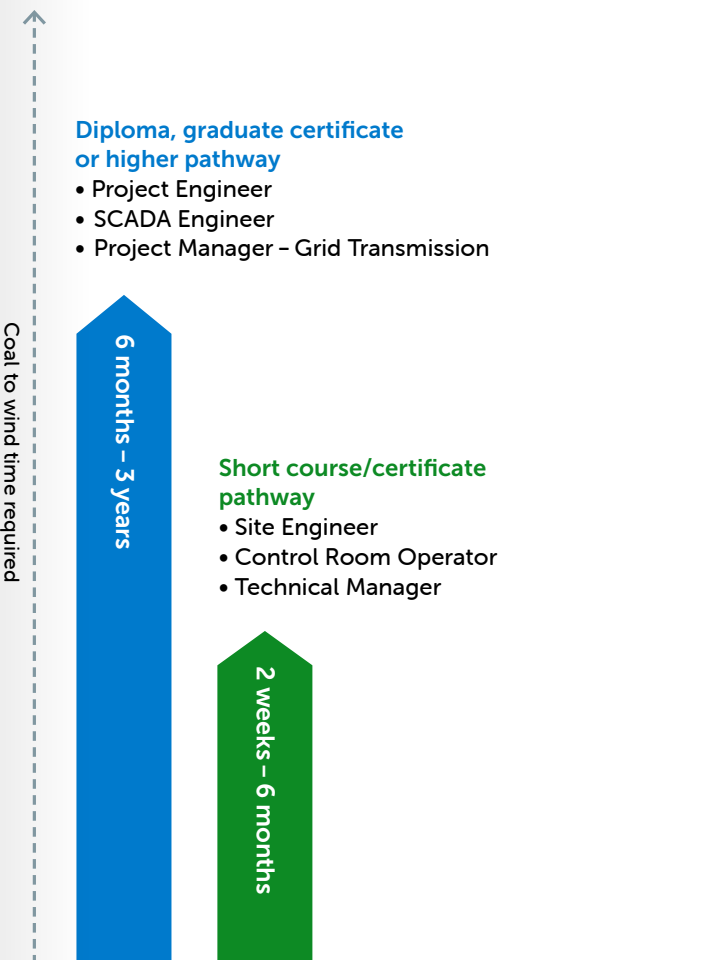
Day in the life of Project Manager – Grid/Transmission



A Project Manager for Grid and Transmission is responsible for managing the development, design, construction and commissioning of transmission and grid infrastructure of an offshore wind project. The Project Manager of Grid and Transmission would work with the engineering design team, key stakeholder, and the client to ensure the transmission scope is delivered in a timely manner meeting budget and safety requirements.

The Project Manager will work in an office-based location and on site, on a Monday – Friday business hours basis but may be required to travel to site after hours including weekends if required.

Other Engineer Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Post Graduate Studies in relevant field**
 - Multiple universities throughout Victoria
 - Length: 6 months – 10 years depending on the study
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application

Further training information can be found at training.gov.au



Project Length



A Project Manager for Grid and Transmission will generally be engaged during the development phase of the project and will remain during the construction and operations & maintenance phase of the project. This means that this role could be required for the whole life cycle of the wind project, approximately 30 years.



Engineer to SCADA Engineer

Engineer (Coal)	SCADA Engineer (Wind)
	
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant discipline > Working at Heights certification > Risk Assessment/JSA training certification > Confined Space certification > Low Voltage rescue training with CPR certification 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Engineering degree in relevant field > Masters or post graduate study in industrial controls/SCADA Engineering* > Construction industry white card (construction phase only) > OGUK Medical and Chester Step Test <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Extensive engineering experience working in power generation > Technical skill set including but not limited to engineering design, planning, environmental impact, and operational analysis > Strong understanding of transmission sector > Ability to follow company policies, procedures, and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Microsoft suite proficiency > Commercial acumen > Organisational skills with the ability to prioritise and adapt to changing deadlines > Ability to work effectively as part of a team > Capability to work a rotational, 24-hour roster if required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience heavy industry setting such as power as part of an engineering team > Understanding of SCADA software and solutions > Baseline understanding of offshore wind including technology and processes > Working knowledge of industrial instrumentation, programmable logic controllers (PLCs) and automation > Capability to work with SCADA systems for fault finding and remote operation > Ability to read and analyse data to improve wind farm control performance > Strong communication skills and team player > Ability to work offshore if required > Availability to work a rotational roster or flexible hours if required > Safety first attitude

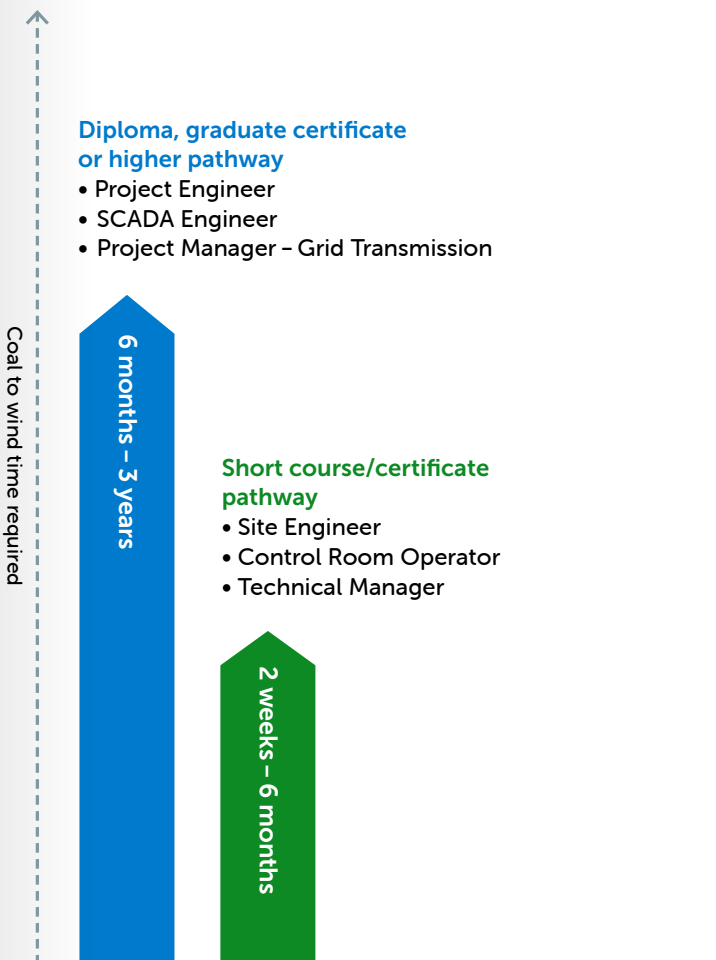
Day in the life of a SCADA Engineer



The Supervisory Control and Data Acquisition (SCADA) Engineer is responsible for all SCADA requirements for an offshore wind farm. This would include design, technical drawing and ensuring the system implemented follows contract schedules and meets requirements for sensor and control systems.

The SCADA Engineer will work in an office-based or site location, on a Monday - Friday business hours basis but may be required after hours including weekends if there is an issue that needs to be rectified with the system.

Other Engineer Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Post Graduate Studies in SCADA or Industrial Controls**
 - Engineering Institute of Technology
 - Victoria University
 - Swinburne University
 - Various providers online

Length: varies according to course
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)

Length: 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland

Length: 2-6 hours

Further training information can be found at training.gov.au



Project Length



The SCADA engineer will most likely be engaged towards the end of the development phase of the project, will remain during the construction and may also be needed for the operations & maintenance phase for breakdown or maintenance work. This means that this role could be required over the course of the life cycle of the project for up to 25 years.



Mechanical Fitter to Wind Turbine Technician

Mechanical Fitter (Coal) 	Wind Turbine Technician (Wind) 
<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualified Mechanical Fitter > Working at Heights certification > Laser alignment training > Risk Assessment/JSA training certification > Dangerous Goods Training desirable > Confined Space certification > Low Voltage rescue training with CPR certification) > Firefighting certifications desirable > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable > Construction industry white card desirable 	<p>Recommended qualifications/certificates</p> <ul style="list-style-type: none"> > Trade qualification as a mechanical fitter or electrician (or equivalent) > GWO Basic Safety Training (BST) certification* > E-Learning training for service lift model (turbine manufacturer specific) > IRATA Rope Access certification* > OGUK Medical and Chester Step Test > MSIC Card > Advanced First Aid Training > High risk licence with Dogging (DG) and Rigging (RB) certifications. > Construction industry white card (construction phase of project only) <p><small>* main new qualification required for this coal position to transition to the offshore wind role</small></p>
<p>Required skills/experience</p> <ul style="list-style-type: none"> > Experience providing boilermaking maintenance services on a power plant/equipment > Extensive welding experience > Ability to follow company policies, procedures and safe work practices > Strong communication skills with capability to work effectively with all team members and stakeholder groups > Ability to undertake emergency repairs on plant and equipment as required > Ability to work effectively as part of a team > Experience working in an industrialised setting > Capability to work a rotational, 24 hour roster > Leadership qualities with the ability to lead and mentor apprentices and other team members as required > Capability to use computerised work systems and software > Strong safety focus with ability to stop the job if unsafe 	<p>Required skills/experience</p> <ul style="list-style-type: none"> > Previous experience heavy industry setting such as power in a technical role > Rope access/working at heights experience desirable > Mechanical aptitude with ability to repair mechanical, hydraulic, breaking and electrical systems of wind turbines > 'Hands on' experience - capability to work on manual tasks > Physical ability to climb wind turbines and complete physically demanding tasks at heights > Troubleshooting skills > Capability to work with SCADA systems for fault finding and remote operation > Ability to read, document and report on all work activities including testing and commissioning > Strong communication skills with the ability to work in a small team of technicians > Ability to work offshore at sea in varying weather conditions > Availability to work a rotational roster > Safety first attitude

Day in the Life of a Wind Turbine Technician

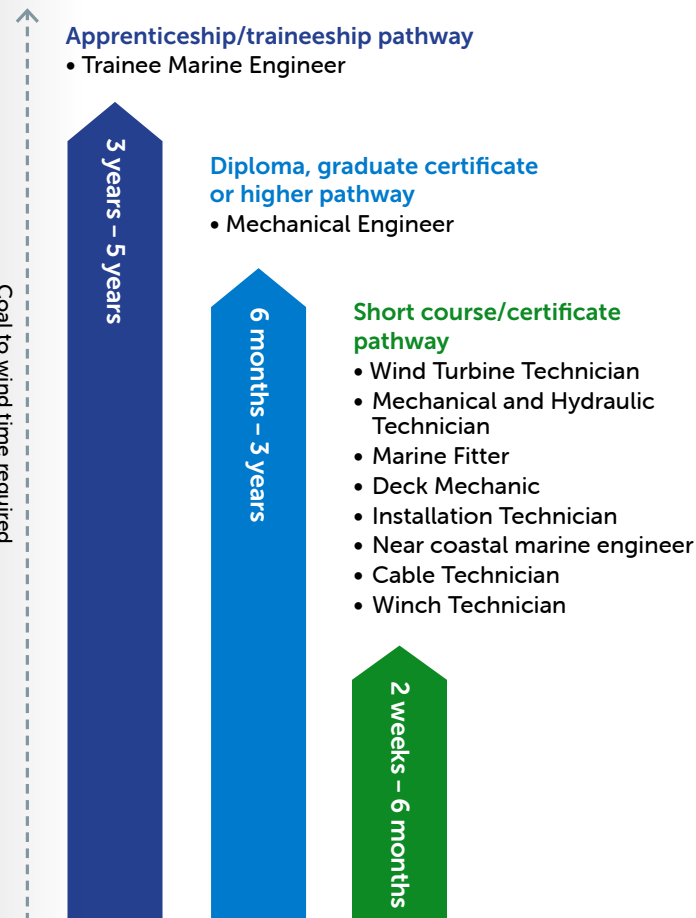


A Wind Turbine Technician works offshore on the wind turbine completing maintenance checks and routine inspections. Technicians must complete GWO wind turbine emergency training and rope access, working at heights training due to the isolation and great height of each turbine.

Each day, a Wind Turbine Technician will arrive at the turbine via a service operation vessel (SOV) or crew transfer vessel (CTV) and board the turbine either directly from the vessel or via a gangway, rope or platform. The technicians work in a small group of 2-3 technicians and must bring their own lunch and toiletries to the facility.

Wind Turbine Technicians are employed during the construction phase of the project and form a large part of the Operations and Maintenance team during this phase of the project. Wind Turbine Technicians typically complete a rotational roster and work shifts of up to 12 hours a day (weather and project dependent).

Other Mechanical Fitter Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **IRATA Rope Access Training**
 - Multiple providers across Victoria
 - Length: Approximately 5 days - dependent on level
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-3 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 5 days
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application

Further training information can be found at training.gov.au

Project Length



The Wind Turbine Technician will be engaged during the construction phase with the amount of these types of roles increasing as more and more wind turbines are commissioned and become operational. Wind Turbine Technician roles are typically required for 25-30 years during the life cycle of an offshore wind farm.



Mechanical Fitter to Mechanical/Hydraulics Technician

Mechanical Fitter (Coal)



Recommended qualifications/certificates

- > Trade qualified Mechanical Fitter
- > Working at Heights certification
- > Laser alignment training
- > Risk Assessment/JSA training certification
- > Dangerous Goods Training desirable
- > Confined Space certification
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable
- > Construction industry white card desirable

Required skills/experience

- > Experience providing boilermaking maintenance services on a power plant/equipment.
- > Extensive welding experience
- > Ability to follow company policies, procedures, and safe work practices
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Ability to undertake emergency repairs on plant and equipment as required
- > Ability to work effectively as part of a team
- > Experience working in an industrialised setting
- > Capability to work a rotational, 24-hour roster
- > Leadership qualities with the ability to lead and mentor apprentices and other team members as required
- > Capability to use computerised work systems and software
- > Strong safety focus with ability to stop the job if unsafe

Mechanical/Hydraulics Technician (Wind)



Recommended qualifications/certificates

- > Trade qualification Mechanical Fitter
- > **GWO Basic Safety Training (BST) certification***
- > E-Learning training for service lift model (turbine manufacturer specific)
- > **IRATA Rope Access certification***
- > OGUK Medical and Chester Step Test
- > MSIC Card
- > Advanced First Aid Training
- > High risk licence with Dogging (DG) and Rigging (RB) certifications
- > Construction industry white card (construction phase of project only)

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous experience heavy industry setting such as power in a mechanical and or hydraulics role
- > Rope access/working at heights experience desirable
- > Electrical, hydraulics and mechanical understanding
- > 'Hands on' experience - capability to work on manual tasks
- > Physical ability to climb wind turbines and complete physically demanding tasks at heights
- > Ability to diagnose, repair and service hydraulic equipment/structures
- > Capability to work with SCADA systems for fault finding and remote operation
- > Ability to read, document and report on all work activities including testing and commissioning
- > Strong communication skills with the ability to work in a small team of technicians
- > Ability to work offshore at sea in varying weather conditions
- > Availability to work a rotational roster
- > Safety first attitude

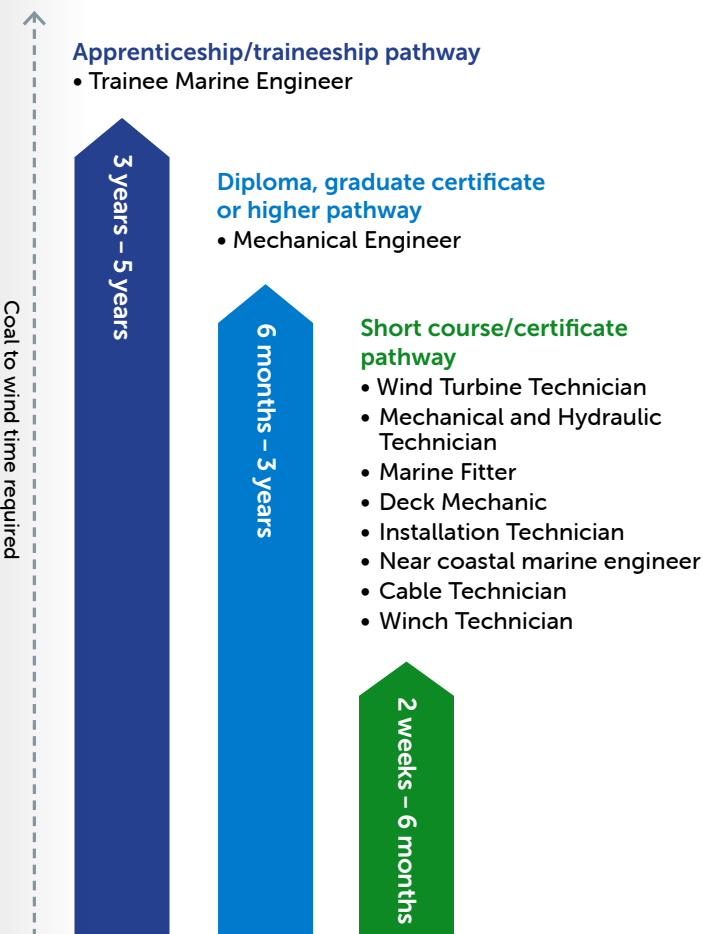
Day in the Life of a Mechanical/Hydraulics Technician



A Mechanical/Hydraulics Technician works offshore on the wind turbine completing servicing and repairs to the turbine hydraulic and mechanical components. Mechanical/Hydraulics Technicians must be willing to work at great heights in varying weather conditions (within reason), isolated at sea with only 1-2 other team members at a time.

Each day, the Technicians will arrive at the turbine via a service operation vessel (SOV) or crew transfer vessel (CTV) and board the turbine either directly from the vessel or via a gangway, rope or platform. The Mechanical/Hydraulics Technician work a rotational roster and are required for the construction commissioning and operations and maintenance phase of an offshore wind project.

Other Mechanical Fitter Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **IRATA Rope Access Training**
 - Multiple providers across Victoria
 - Length: Approximately 5 days - dependent on level
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-3 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
 - Association for Materials Protection and Performance (AMPP)
 - Length: 5 days
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application

Further training information can be found at training.gov.au

Project Length



The Mechanical and Hydraulic Technician will be engaged during the construction phase with the amount of these types of roles increasing as more and more wind turbines are commissioned and become operational. These Technician roles are typically required for 25+ years during the life of an offshore wind farm and make up a large component of the O&M team.



Mechanical Fitter to Trainee Marine Engineer

Mechanical Fitter (Coal)



Recommended qualifications/certificates

- > Trade qualified Mechanical Fitter
- > Working at Heights certification
- > Laser alignment training
- > Risk Assessment/JSA training certification
- > Dangerous Goods Training desirable
- > Confined Space certification desirable
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > High risk licence with Forklift (LF) and Elevated Work Platform (EWP) certifications desirable
- > Construction industry white card

Required skills/experience

- > Experience providing boilermaking maintenance services on a power plant/equipment.
- > Extensive welding experience
- > Ability to follow company policies, procedures and safe work practices
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Ability to undertake emergency repairs on plant and equipment as required
- > Ability to work effectively as part of a team
- > Experience working in an industrialised setting.
- > Capability to work a rotational, 24-hour roster
- > Leadership qualities with the ability to lead and mentor apprentices and other team members as required
- > Capability to use computerised work systems and software
- > Strong safety focus with ability to stop the job if unsafe

Trainee Marine Engineer (Wind)



Recommended qualifications/certificates

- > Trade qualification recognised by AMSA such as Mechanical Fitter
- > Year 12 school certificate (or equivalent as approved by AMSA)
- > **Enrolment/willingness to study Diploma of Marine Engineering (Engineering Watchkeeper)***
- > AMSA Medical
- > MSIC Card
- > Australian Passport
- > Advanced First Aid Training
- > Construction industry white card (construction phase of project only)

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous experience heavy industry setting such as power in a mechanical role
- > Mechanical aptitude with engine familiarity
- > 'Hands on' experience - capability to work on manual tasks
- > Ability to diagnose, repair and service mechanical equipment/structures
- > Physical ability to pass AMSA medical including color blindness test
- > Ability to read, document and report on all work activities including repairs and maintenance
- > Strong communication skills with the ability to work in a team
- > Ability to work offshore at sea in varying weather conditions
- > Availability to mobilise and demobilise a vessel internationally if required
- > Availability to work a rotational roster
- > Safety first attitude

Day in the Life of a Trainee Marine Engineer

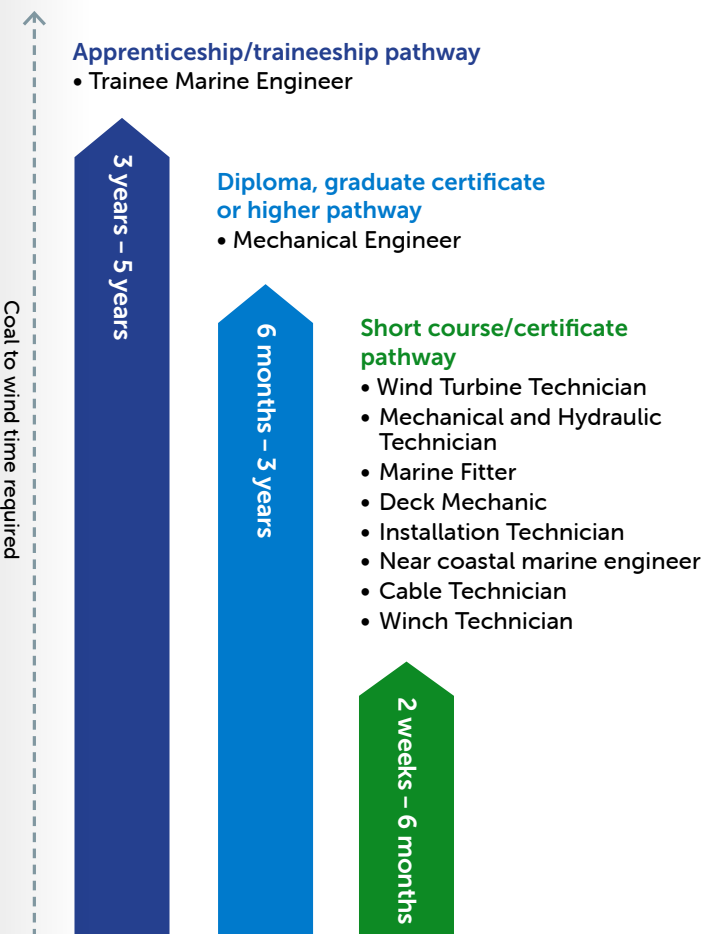


A Trainee Marine Engineer role is a traineeship position into the maritime industry. To enter this traineeship, students must already hold an AMSA recognised trade (mechanical fitter or equivalent). Once qualified the Trainee holds an Engineer Watchkeeper Certificate of Competency (CoC) can hold a Watchkeeper Engineering position on any vessel, of any size within the guidelines outlined in the CoC.

A typical day would either be at college or at sea completing 'sea service'. The traineeship involves studying a Diploma of Marine Engineering (Engineer Watchkeeper) at an AMSA recognised Australian college before completing 36 weeks sea service on vessels greater than or equal to 750KW.

When working at sea, a seafarer typically works on an equal time roster of 4 or 5 weeks at a time, but this varies from project to project and on the scope of work.

Other Mechanical Fitter Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Diploma of Marine Engineering (Engineer Watchkeeper) - not available in Victoria**
 - Bachelor of Applied Science (Marine Engineering) AMC, Tasmania
 - Diploma of Marine Engineering (Engineer Watchkeeper), Hunter TAFE NSW
 - Diploma of Marine Engineering (Engineer Watchkeeper), South Metro TAFE WA

Length: 1 year
- **Advanced First Aid**
 - Multiple providers across Victoria

Length: 2 days
- **Construction Industry White Card**
 - TAFE Gippsland

Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View

Length: approximately 2 weeks after application
- **AMSA Medical**
 - Sonic Health Plus

Length: approximately 3 hours

Further training information can be found at training.gov.au

Project Length



The Trainee Marine Engineer can work offshore on various vessel types during both the construction and operations phases of an offshore wind project. A marine engineer can work on all types of vessels and projects (not just offshore wind). There is currently a shortage of maritime engineers in Australia and an expectation of continuing high demand as more projects come onto line in the next 5-10 years.



Mobile Plant Operator to Deck cadet

Mobile Plant Operator (Coal)



Recommended qualifications/certificates

- > Civil Construction, Mobile Plant or Earth Moving certification (or equivalent)
- > CPR certification
- > Basic Life Support certification
- > Construction industry white card desirable
- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification

Required skills/experience

- > Background in civil construction/earth moving
- > Experience with front end loaders, backhoe, road roller, skid steer, feeder breaker, haul truck, watercart, transporter, bucket wheel excavator, dozers, compactors and travelling stackers
- > Experience preparing machines for operation
- > Experience loading and unloading equipment from loaders and moving around sites
- > Experience clearing land and harvesting crops
- > Experience working in an industrialised setting
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

Deck Cadet (Wind)



Recommended qualifications/certificates

- > AMSA Medical
- > Completion of year 12 high school certificate of equivalent
- > Australian Passport
- > **Enrolment in/willingness to complete Diploma of Maritime Operations (Watchkeeper Deck)***
- > Advanced First Aid certification
- > MSIC card

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Completion of high school year 12 certificate of equivalent
- > Familiarity with shift and rostered work highly desirable
- > Ability to work at sea during varying weather conditions
- > Ability to go to complete traineeship - both at college studying and then to complete a total of 18 months sea service
- > Strong safety attitude with ability to stop the job if unsafe
- > 'Hands on' skill set highly desirable.
- > Capable of working at sea, crew changing in and out of different ports including international when required for mobilisations and demobilisations

Day in the Life of a Deck Cadet

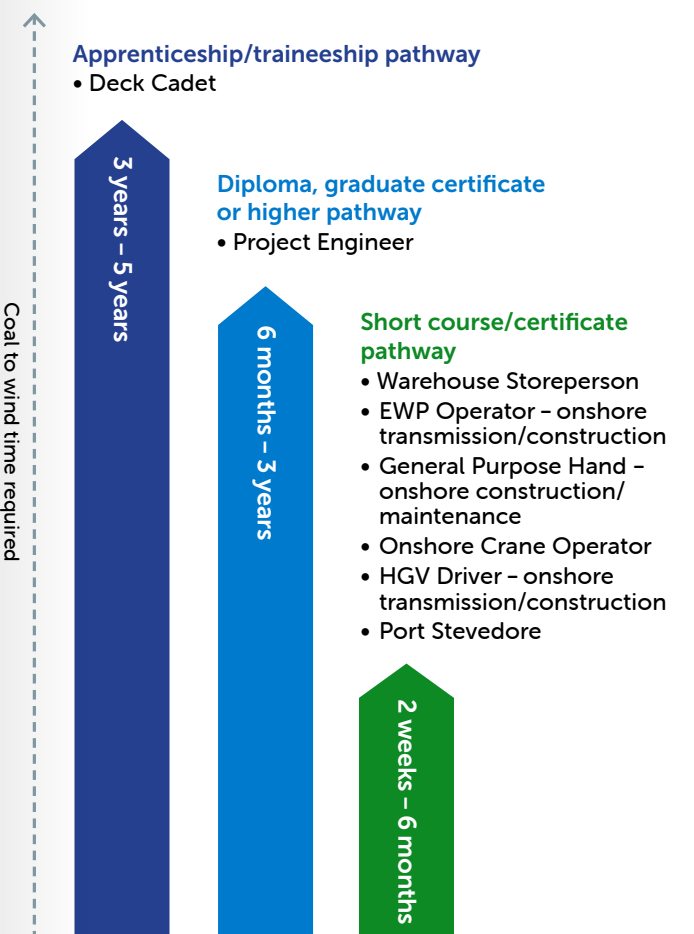


A deck cadetship is a traineeship position into the maritime industry. Once qualified the cadet holds a Deck Watchkeeper Certificate of Competency (CoC) can hold a Deck Watchkeeper position on any vessel, of any size within the guidelines outlined in the CoC.

A typical day would either be at college or at sea completing 'sea service'. The cadetship involves studying a Diploma of Maritime Operations (Watchkeeper Deck) at an AMSA recognised Australian college before completing 18 months sea service on vessels greater than or equal to 500GT.

When working at sea, a seafarer typically works on a equal time roster of 4 or 5 weeks at a time but this varies from project to project and on the scope of work.

Other Mobile Plant Operator Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Diploma of Maritime Operations (Watchkeeper Deck) - not available in Victoria**
 - Advanced Diploma of Applied Science (Nautical Science) AMC, Tasmania
 - Diploma of Maritime Operations (Watchkeeper Deck), Hunter TAFE NSW
 - Diploma of Maritime Operations (Watchkeeper Deck), South Metro TAFE WA Length: 1 year
- **Advanced First Aid**
 - Multiple providers across Victoria Length: 2 days
- **Construction Industry White Card**
 - TAFE Gippsland Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View Length: approximately 2 weeks after application
- **AMSA Medical**
 - Sonic Health Plus Length: approximately 3 hours

Further training information can be found at training.gov.au

Project Length



The Deck Cadet can work offshore on various vessel types during both the construction and operations phases of an offshore wind project. A Deck Officer (qualified deck cadet) can work on all types of vessels and projects (not just offshore wind).

There is currently a shortage of deck officers in Australia and an expectation of continuing high demand as more projects come onto line in the next 5-10 years



Mobile Plant Operator to Onshore Crane Operator

Mobile Plant Operator (Coal)



Recommended qualifications/certificates

- > Civil Construction, Mobile Plant or Earth Moving certification (or equivalent)
- > CPR certification
- > Basic Life Support certification
- > Construction industry white card desirable
- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification

Required skills/experience

- > Background in civil construction/earth moving
- > Experience with front end loaders, backhoe, road roller, skid steer, feeder breaker, haul truck, watercart, transporter, bucket wheel excavator, dozers, compactors and travelling stackers
- > Experience preparing machines for operation.
- > Experience loading and unloading equipment from loaders and moving around sites
- > Experience clearing land and harvesting crops
- > Experience working in an industrialised setting
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

Onshore Crane Operator (Wind)



Recommended qualifications/certificates

- > **High Risk Licence with Crane Operator (CO) Certification, with Dogging (DG), Advanced Scaffolding (SA) and Advanced Rigging (RA) certifications***
- > Permit to work training.
- > Advanced First Aid certification
- > Working at heights certification
- > Manual Handling certification
- > LEEA Lifting Equipment General (LEG) Training
- > Construction industry white card
- > OGUK Medical

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Experience with crane maintenance and repairs
- > Familiarity with permit to work systems
- > Heavy lifting experience desirable
- > Strong safety attitude with ability to stop the job if unsafe
- > Ability to use two-way communication equipment as and when required
- > Capable of working a rotational roster

Day in the Life of an Onshore Crane Operator

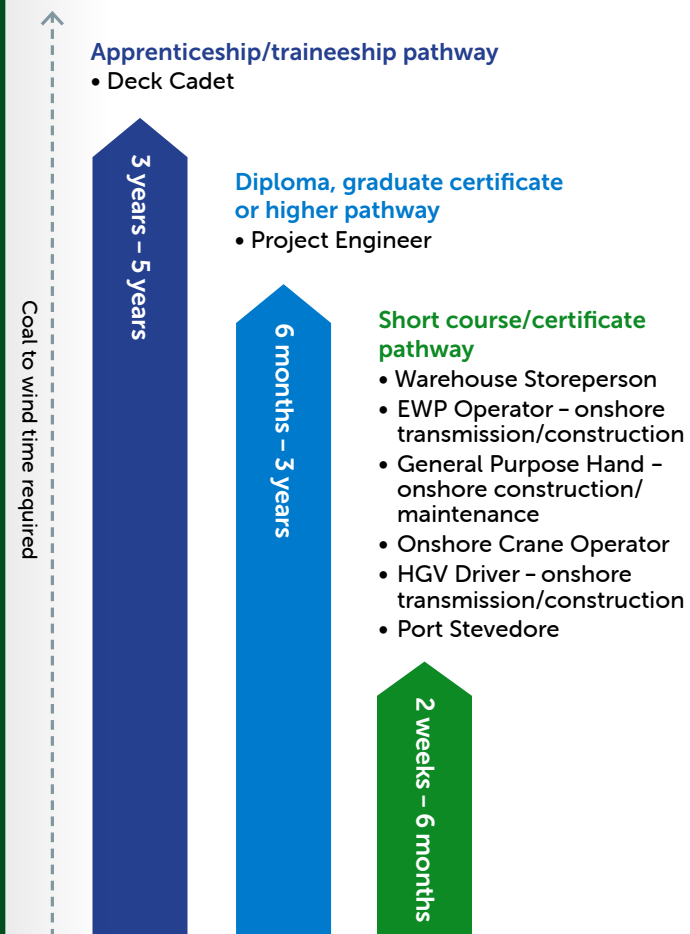


An onshore crane operator completes a variety of tasks dependent on the scope of work. These scopes could include construction for onshore transmission, construction of supply base/construction yard facilities and loading and unloading of equipment, parts and supplies from ports and vessels.

Onshore crane operators tend to be residential workers who work shift work on a rotational roster (dependent on project scope). A crane operator will work in a variety of weather conditions (within reason) and will support a number of work groups.

Crane operators need to have strong communication skills and can operate a two-way radio to ensure the safety and integrity of each lift as well as the project personnel. A crane operator works in a confined space at great height, so these two potential fears need to be considered for anyone looking to transition into this role.

Other Mobile Plant Operator Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical**
 - Multiple providers across Victoria
 - Length: Approximately 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-3 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **Working at Heights Certification**
 - Federation University
 - TAFE Gippsland
 - Length: 1-2 days
- **Permit to Work Training**
 - Fire and Safety Australia, Victoria
 - Thomson Bridge, Brooklyn, Vic
 - Various online training programs
 - Length: 4 hours

Further training information can be found at training.gov.au

Project Length



An onshore crane operator would be used on various scopes including assembly, construction, and onshore transmission during the construction phase of the offshore wind project. Depending on the project and scope, this could be anywhere between 6 months - 3 years work.



Mobile Plant Operator to Warehouse/Storeperson

Mobile Plant Operator (Coal)



Recommended qualifications/certificates

- > Civil Construction, Mobile Plant or Earth Moving certification (or equivalent)
- > CPR certification
- > Basic Life Support certification
- > Construction industry white card desirable
- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification

Required skills/experience

- > Background in civil construction/earth moving
- > Experience with front end loaders, backhoe, road roller, skid steer, feeder breaker, haul truck, watercart, transporter, bucket wheel excavator, dozers, compactors and travelling stackers
- > Experience preparing machines for operation
- > Experience loading and unloading equipment from loaders and moving around sites
- > Experience clearing land and harvesting crops
- > Experience working in an industrialised setting
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

Onshore Warehouse/Storeperson (Wind)



Recommended qualifications/certificates

- > Cert IV in Logistics or equivalent certification
- > **High Risk Licence with Forklift (LF) Certification, Dogging (DG), Elevated Work Platform (EWP) and Basic rigging (RB) certifications***
- > Advanced First Aid certification
- > MSIC card
- > **Manual Handling certification***
- > **Dangerous Goods certification***
- > Current Australian Drivers Licence
- > Construction industry white card
- > OGUK Medical

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Experience working on site in an industrialised setting
- > Familiarity with permit to work systems
- > Transport, logistics, inventory experience desirable but not mandatory
- > Strong safety attitude with ability to stop the job if unsafe
- > Strong communication skills with the ability to work with various stakeholder groups to ensure a timely and effective project delivery
- > Capable of working a rotational roster

Day in the Life of a Warehouse/Storeperson

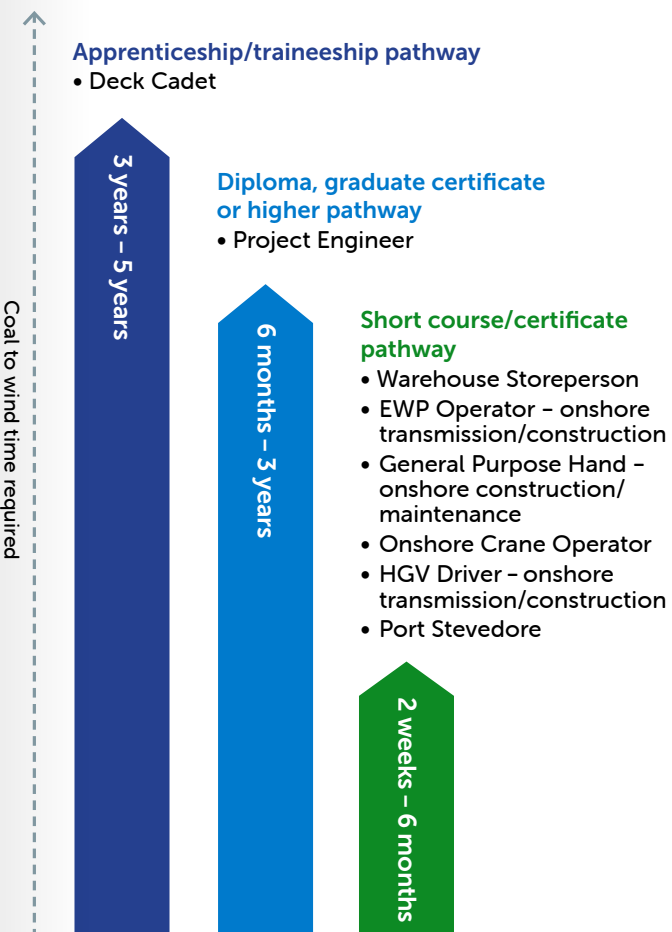


A Warehouse/Storeperson is required to work at the supply base for the offshore wind project during both the construction and operations and maintenance phase of the project.

A typical day would include inventory stock checks as well as ordering parts and equipment as required for the project. The Warehouse/Storeperson must ensure that pricing is kept within budget restraints and that parts and equipment are delivered in time for the project scopes.

The person in this position would work rostered work including night shift if required and would be site based for the duration of the role.

Other Mobile Plant Operator Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Certificate IV in Logistics**
 - Various courses available online
 - RMIT, Melbourne
 - Swinburne University, Victoria
 - Box Hill Institute, Victoria
 - Length: 2 months (varies according to delivery)
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical**
 - Multiple providers across Victoria
 - Length: Approximately 3-5 hours
- **High Risk Licencing**
 - TAFE Gippsland
 - Length: 1-3 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **Manual Handling**
 - TAFE Gippsland
 - Length: 2 hours
- **Dangerous Goods Training**
 - AITAC, Tullamarine
 - ABLIS, Geelong
 - All Dangerous Goods Training, Rye
 - DG Train Online, Victoria
 - Length: 2 days

Further training information can be found at training.gov.au

Project Length



An onshore crane operator would be used on various scopes including assembly, construction, and onshore transmission during the construction phase of the offshore wind project. Depending on the project and scope, this could be anywhere between 6 months - 3 years work.



Power Worker to Deckhand Mate CTV Crew

Power Worker (Coal)



Recommended qualifications/certificates

- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Working at Heights certification
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > Construction industry white card desirable
- > High Risk Licence with Forklift (LF), Elevated Work Platform (EWP), Basic Rigging (RB), Basic Dogging (DG) or Crane Licences (various) desirable but not essential

Required skills/experience

- > Background in civil construction/earth moving
- > Experience with front end loaders, backhoe, road roller, skid steer, feeder breaker, haul truck, watercart, transporter, bucket wheel excavator, dozers, compactors and travelling stackers
- > Experience preparing machines for operation
- > Experience loading and unloading equipment from loaders and moving around sites
- > Experience clearing land and harvesting crops
- > Experience working in an industrialised setting
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

CTV Crew - Deckhand or Mate (Wind)



Recommended qualifications/certificates

- > **AMSA endorsed near coastal maritime certificate such as (General Purpose Hand Near Coastal or Coxswain Grade 1 or 2 Near Coastal)***
- > AMSA Medical
- > MSIC Card
- > Construction industry white card (construction phase of project only)
- > Advanced First Aid

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous time on a small inshore vessel desirable but not essential
- > 'Hands on' experience - capability to work in all areas on vessel including maintenance, servicing and other manual tasks
- > Ability to work at sea in varying weather conditions
- > Ability to work in a small team ensuring the safety of passengers at all time
- > Strong communication skills with the ability to support all passengers during crew transfers
- > Experience working in on a rotational roster
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe - particularly in relation to boarding and disembarking from the wind turbine to the CTV

Day in the life of a CTV Deckhand/Mate

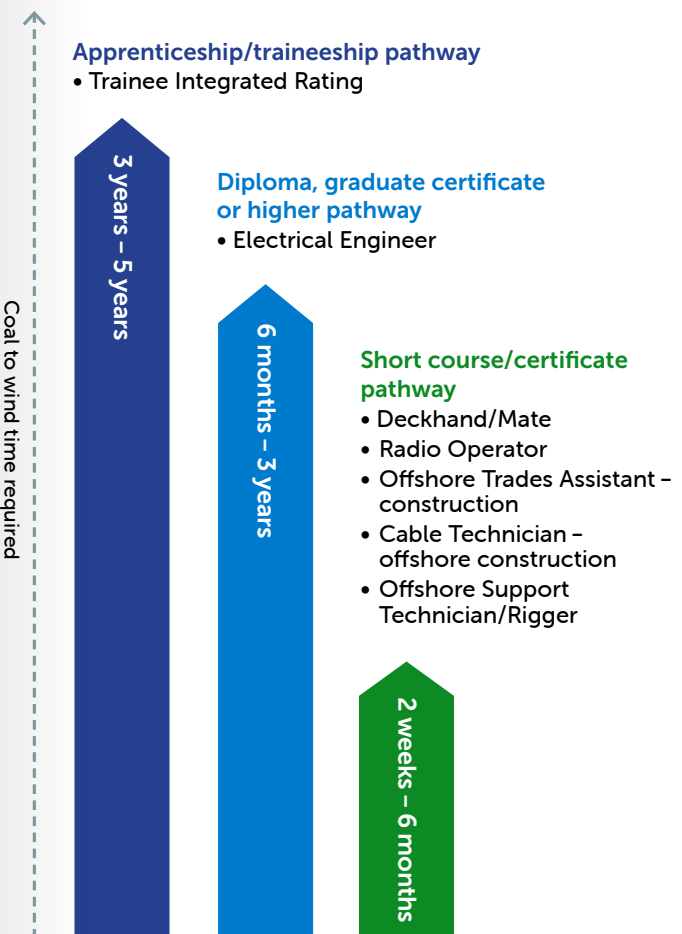


A CTV Deckhand/Mate holds an inshore/near coastal maritime certification which allows them to work exclusively in the inland waters for Australia as defined by NSCV Part B.

A typical day would include ferrying passengers to and from the offshore wind turbines and substation(s) for work as well as maintenance tasks such as painting, cleaning, and loading/unloading cargo. Additionally, the Deckhand/Mate must fulfill navigational maritime duties to ensure the safety of the passengers, other crew members and vessel.

CTV crew are residential workers who work a rotational roster. The length of rostered shifts can be weather dependent and vary according to the amount of daylight from season to season.

Other Power Worker Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Near Coastal Qualifications**
 - TAFE Gippsland
 - Length: Varies according to qualification - generally a couple of weeks to months
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **AMSA Medical**
 - Sonic Health Plus
 - Length: approximately 3 hours

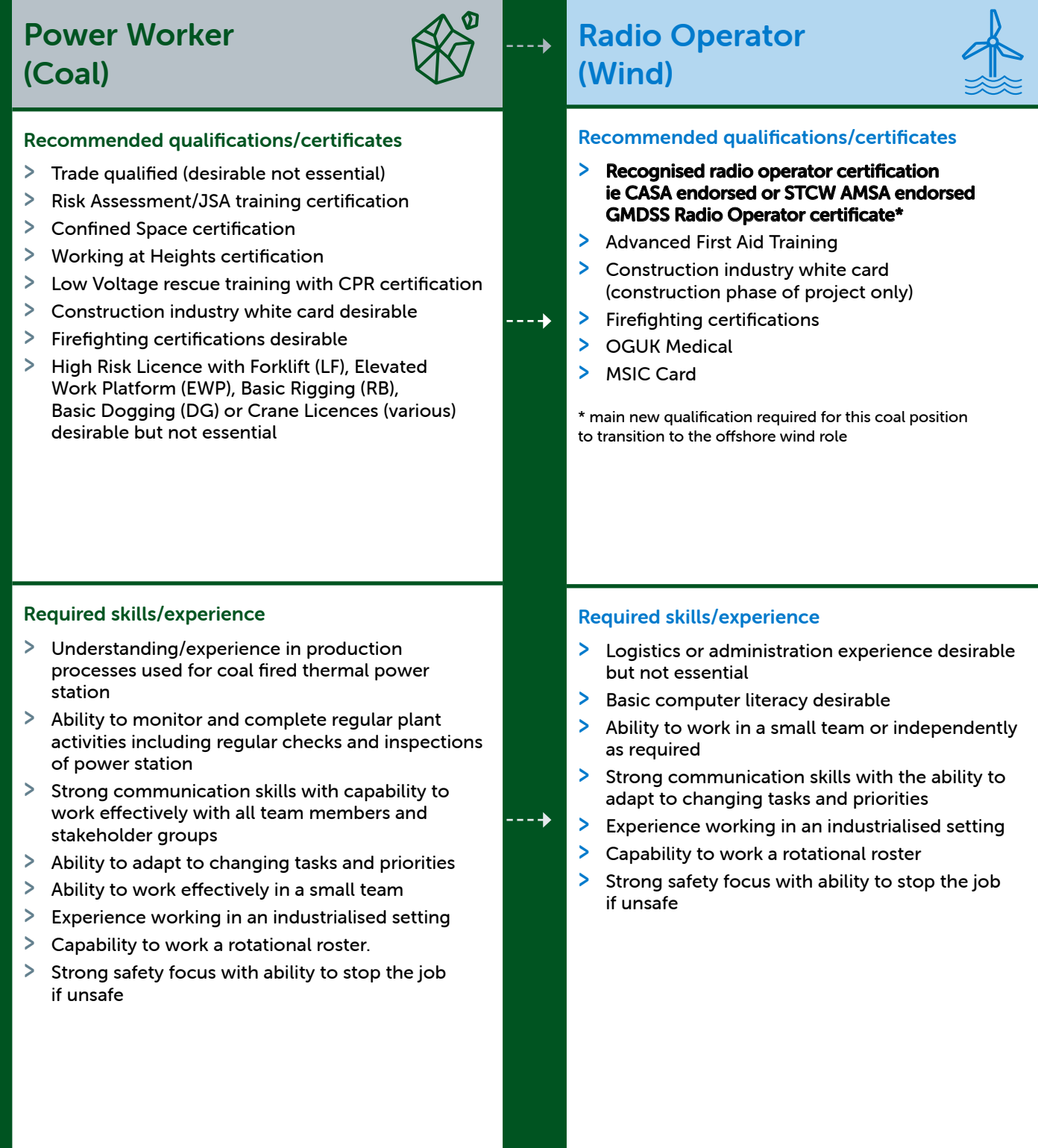
Further training information can be found at training.gov.au

Project Length



The Deckhand/Mate for the CTV would be required during the operations and maintenance phase of the project for crew transfers. Based on CTV's being utilised the whole of the O&M phase, this role would be required for 25+ years. The role could also be required during the construction phase if the project chose to utilise CTV's also, but this would vary from project to project.

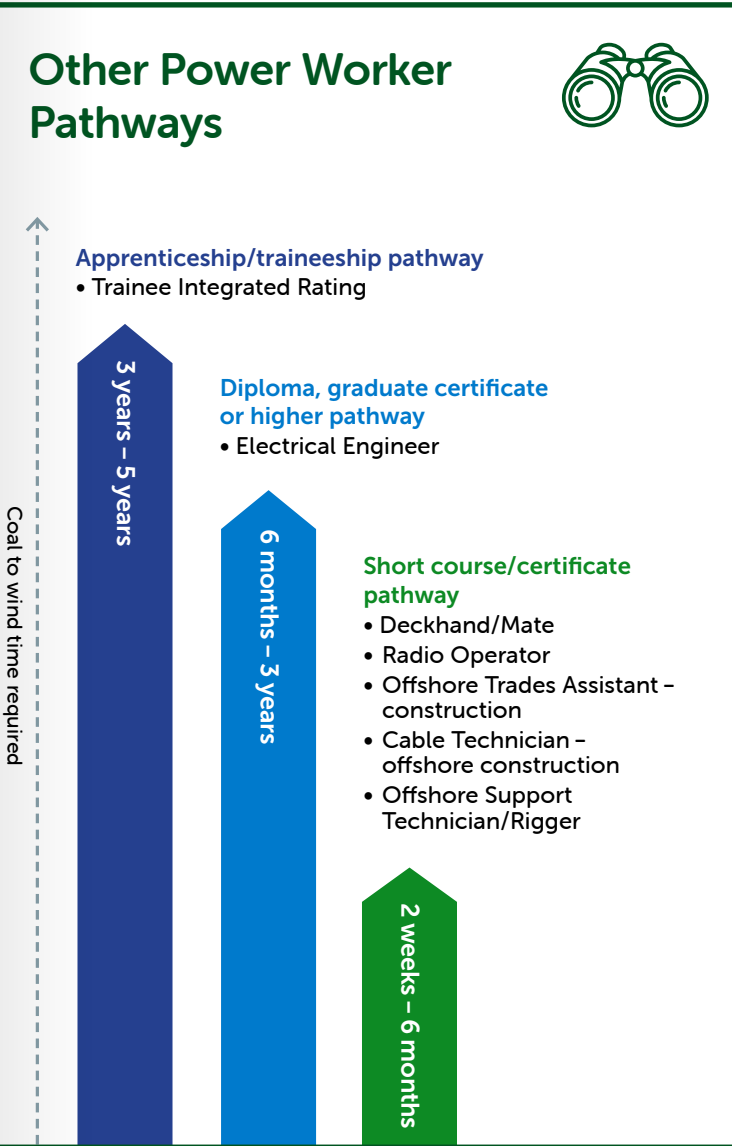
Power Worker to Radio Operator



Day in the Life of a Radio Operator

A Radio Operator can work either onshore or offshore dependent on the project scope and facility employed to service. The Radio Operator must ensure that all communications are clearly delivered to all stakeholders in a timely and effective manner. The Radio Operator is often also required to undertake administration duties such as booking crew changes including flights, helicopters (if applicable) and CTVs (if applicable).

The Radio Operator typically works a rotational roster which will be dependent on the scope (onshore/offshore). A Radio Operator may also be required to obtain extra certifications such as BOSIET and MSIC card, if working offshore.



Training (Victoria)

Please note course timeframes are approximate and may vary between providers.

- **GMDSS Radio Operator Certification**
 - Defence Force Signals, RAN, Westernport Vic
 - AMC (Tasmania)
 - Length: 3-10 days
- **CASA endorsed Aeronautical Radio Operator Certification**
 - Gippsland Flight Training, Gippsland
 - Autonomous Technology, Melbourne
 - Various online courses
 - Length: 2 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical**
 - Multiple providers across Victoria
 - Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **Fire Fighting Qualifications**
 - ERGT, Melbourne
 - Fire and Safety Australia, Victoria
 - Length: Varies according to qualification - generally 1-3 days

Further training information can be found at training.gov.au

Project Length

Depending on the project scope, the Radio Operator could be required for the construction and operations and maintenance phase of the project. Based on this, this role could be required for anywhere between 6 months to 25 years.



Power Worker to Trainee Integrated Rating

Power Worker (Coal)



Recommended qualifications/certificates

- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Working at Heights certification
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > Construction industry white card desirable
- > High Risk Licence with Forklift (LF), Elevated Work Platform (EWP), Basic Rigging (RB), Basic Dogging (DG) or Crane Licences (various) desirable but not essential

Required skills/experience

- > Understanding/experience in production processes used for coal fired thermal power station
- > Ability to monitor and complete regular plant activities including regular checks and inspections of power station
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Ability to adapt to changing tasks and priorities
- > Ability to work effectively in a small team
- > Experience working in an industrialised setting
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

Trainee Integrated Rating (Wind)



Recommended qualifications/certificates

- > Trade certificate desirable but not essential
- > **Enrolment in Certificate III in Maritime Operations (Integrated Rating)***
- > AMSA Medical
- > Current Australian passport
- > MSIC Card
- > Advanced First Aid training
- > Construction industry white card (construction phase of project only)
- > Completion of year 10 high school certificate or equivalent

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous time on vessels desirable but not essential
- > 'Hands on' experience - capability to work in all areas on vessel including maintenance, servicing and other manual tasks
- > Ability to work at sea in varying weather conditions
- > Ability to work in a team following directions of Chief Integrated Rating and/or Chief Officer
- > Strong communication skills with ability to work with different stakeholder groups
- > Ability to pass AMSA medical including color blindness test
- > Experience working in on a rotational roster
- > Capability to work a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

Day in the Life of a Trainee Integrated Rating

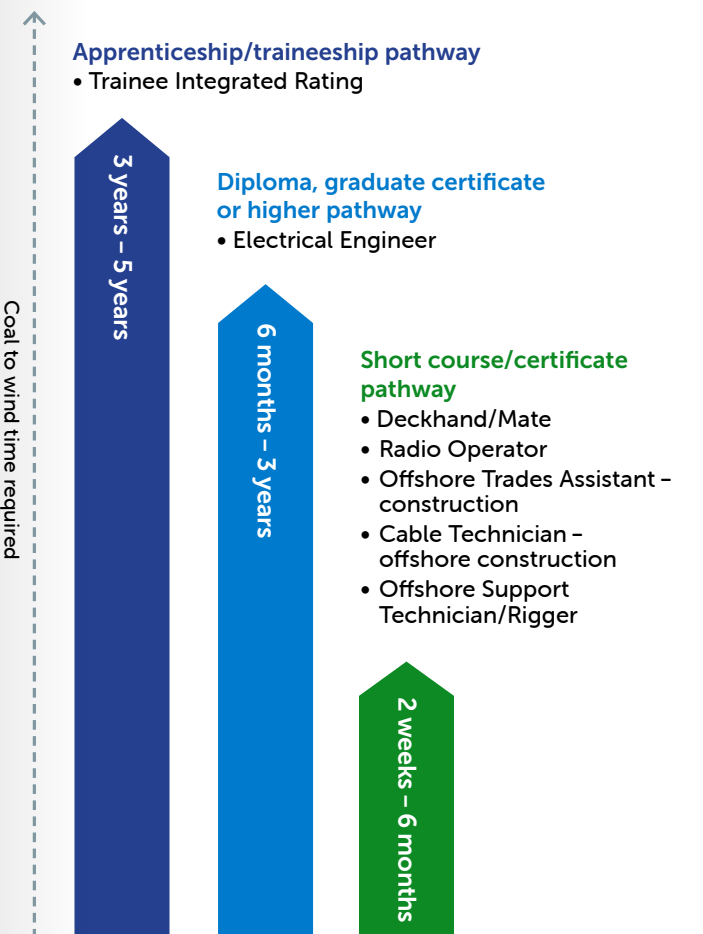


A Trainee Integrated Rating role is a traineeship position for those wanting to enter the maritime industry. Once qualified the Trainee holds an Integrated Rating Certificate of Proficiency (CoP) can hold an Integrated Rating position on any vessel, of any size within the guidelines outlined in the CoP. An Integrated Rating is an internationally recognised Able Seafarer qualification. Duties include maintenance of deck and engine facilities, navigational watches, cargo operations and anchor handling (if relevant).

A typical day would either be at college or at sea completing 'sea service'. The traineeship involves studying a Certificate III in Maritime Operations (Integrated Rating) at an AMSA recognised Australian college before completing 36 weeks sea service.

When working at sea, a seafarer typically works on an equal time roster of 4 or 5 weeks at a time, but this varies from project to project and on the scope of work.

Other Power Worker Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Certificate III in Maritime Operations (Integrated Rating)** - not available in Victoria
 - AMC, Tasmania
 - Hunter TAFE, NSW
 - South Metro TAFE, WA
 - Length: 9 months
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours
- **Maritime Security Identification Card (MSIC)**
 - Victoria Ports Corporation
 - AusCheck
 - Veritas
 - Client View
 - Length: approximately 2 weeks after application
- **AMSA Medical**
 - Sonic Health Plus
 - Length: approximately 3 hours

Further training information can be found at training.gov.au

Project Length



The Trainee Integrated Rating can work offshore on various vessel types during both the construction and operations phases of an offshore wind project. A qualified Integrated Rating can work on all types of vessels and projects (not just offshore wind). There is currently a shortage of seafarers (including Integrated Ratings) in Australia and an expectation of continuing high demand as more projects come onto line in the next 5-10 years.



Unit Controller to Control Room Technician

Unit Controller (Coal)



Recommended qualifications/certificates

- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Working at Heights certification
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > Certificate IV in ESI Generation
- > High Voltage (HV) Switching certification.
- > High Risk Licence with BS (Standard Boiler) and TO (Steam Turbine Operator) certifications
- > Construction industry white card desirable
- > High risk licence with Forklift (LF), Elevated Work Platform (EWP), Basic Rigging (RB), Basic Dogging (DG) or Crane Licences (various) desirable but not essential

Required skills/experience

- > Understanding/experience in operational processes used for coal fired power station
- > Mechanical aptitude with understanding of electrical plant systems
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Computer literacy with ability to company systems
- > Ability to work effectively in a small team
- > Experience working in an industrialised setting.
- > Capability to work a rotational, 24-hour roster
- > Strong safety focus with ability to stop the job if unsafe

Control Room Technician (Wind)



Recommended qualifications/certificates

- > **Electrical or electronics trade, engineering or recognised relevant certificate***
- > GWO Basic Safety Training (BST) certification
- > E-Learning training for service lift model (turbine manufacturer specific)
- > OGUK Medical and Chester Step Test
- > MSIC Card
- > **High Voltage (HV) Switching certification*** (recommended pathway)
- > Advanced First Aid Training
- > Construction industry white card (construction phase of project only)

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous experience in grid connections management and electrical systems
- > High and low voltage switching experience
- > Electrical and electronics understanding
- > 'Hands on' experience - capability to work on manual tasks in an offshore setting and troubleshoot faults and issues as required
- > Understanding of AC/DC electrical circuits
- > Ability to work at sea in varying weather conditions
- > Ability to read, document and report on all work activities including testing and commissioning.
- > Strong communication skills with the ability to work with team members
- > Strong computer literacy skills
- > Ability to work flexible hours and on call as/when required
- > Capability to work with all stakeholder groups.
- > Safety first attitude

Day in the Life of a Control Room Technician

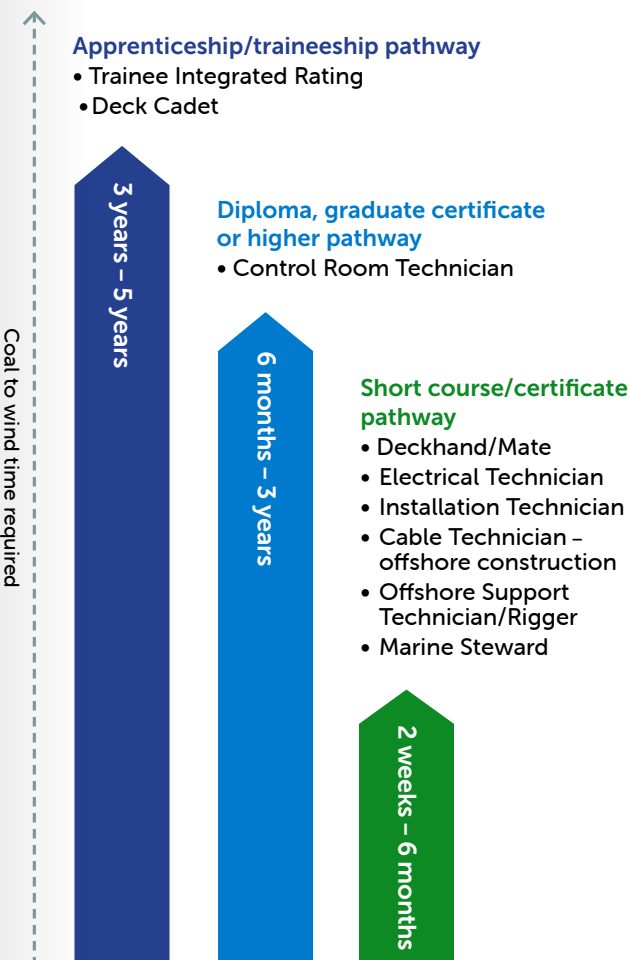


A Control Room Technician manages the electrical operations systems including switching for an offshore wind farm.

Each day, a Control Room Technician be required to undertake tasks such as troubleshooting any system errors and providing technical support to offshore workers. Control Room Technicians are also required to support any planned and unplanned shutdowns of the wind turbines as well as environmental monitoring.

Control Room Technicians are employed during the construction phase of the project and continue into the Operations and Maintenance phase of the project. The Technicians typically work a rotational roster to ensure 24/7 coverage of the project.

Other Unit Controller Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Electrical, electronic, or engineering certification**
 - TAFE Gippsland
 - Federation University
 - Length: Varies according to certification obtained
- **HV Switching Certificate.**
 - Thomson Bridge, Melbourne
 - Volt Edge, Melbourne
 - Optec, Morwell
 - Length: 4 days
- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
 - Length: 2-6 hours

Further training information can be found at training.gov.au

Project Length



The Control Room Technician is engaged during the construction and operations and maintenance phase of the project. Based on this, this role would be required for 25+ years.



Unit Controller to Electrical Technician

Unit Controller (Coal)



Recommended qualifications/certificates

- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Working at Heights certification
- > Low Voltage rescue training with CPR certification
- > Firefighting certifications desirable
- > Construction industry white card desirable
- > Certificate IV in ESI Generation
- > High Voltage (HV) Switching certification
- > High Risk Licence with BS (Standard Boiler) and TO (Steam Turbine Operator) certifications
- > High risk licence with Forklift (LF), Elevated Work Platform (EWP), Basic Rigging (RB), Basic Dogging (DG) or Crane Licences (various) desirable but not essential

Required skills/experience

- > Understanding/experience in operational processes used for coal fired power station
- > Mechanical aptitude with understanding of electrical plant systems
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Computer literacy with ability to company systems
- > Ability to work effectively in a small team
- > Experience working in an industrialised setting.
- > Capability to work a rotational, 24-hour roster
- > Strong safety focus with ability to stop the job if unsafe

Electrical Technician (Wind)



Recommended qualifications/certificates

- > **Electrical trade qualification or recognised equivalent highly desirable***
- > GWO Basic Safety Training (BST) certification
- > E-Learning training for service lift model (turbine manufacturer specific)
- > OGUK Medical and Chester Step Test
- > MSIC Card
- > **High Voltage (HV) Switching certification***
- > High risk licence with Dogging (DG) and Rigging (RB) certifications
- > Construction industry white card (construction phase of project only)

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Proficiency in mechanical and hydraulic equipment with ability to fault find
- > High and low voltage switching experience
- > Electrical and electronics understanding
- > 'Hands on' experience - capability to work on manual tasks in an offshore setting and troubleshoot faults and issues as required
- > Understanding of AC/DC electrical circuits
- > Ability to work at sea in varying weather conditions.
- > Ability to read, document and report on all work activities including testing and commissioning.
- > Strong communication skills with the ability to work with team members.
- > Strong computer literacy skills
- > Ability to work flexible hours and on call as/when required.
- > Capability to work with all stakeholder groups
- > Safety first attitude

Day in the Life of an Electrical Technician

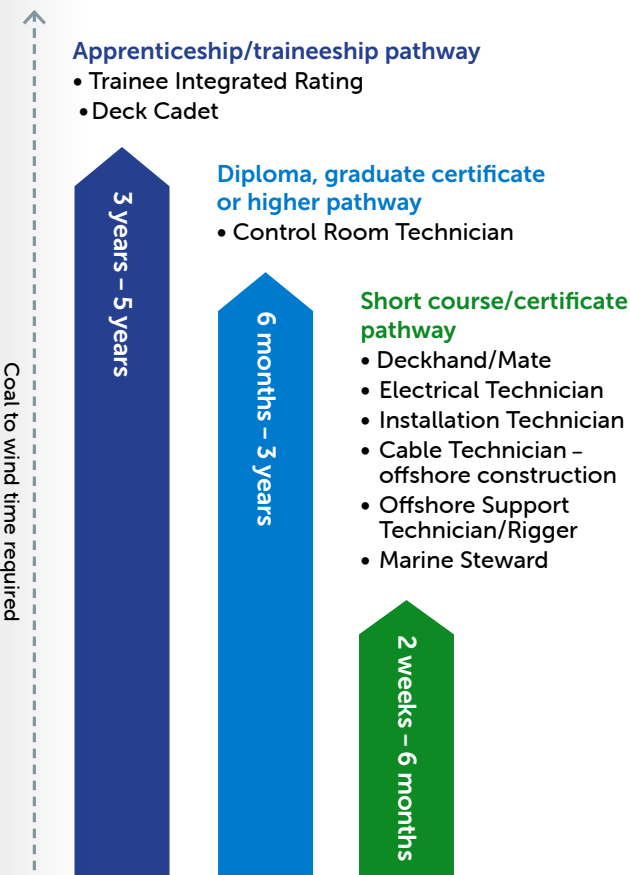


An Electrical Technician works offshore on the wind turbine completing electrical maintenance checks and installations. Technicians must complete GWO wind turbine emergency training and rope access, working at heights training due to the isolation and great height of each turbine. Additionally Electrical Technicians may be required to have a robust understanding of hydraulics, HV and LV switching and be able to read electrical drawings and specifications.

Each day, an Electrical Technician will arrive at the turbine via a service operation vessel (SOV) or crew transfer vessel (CTV) and board the turbine either directly from the vessel or via a gangway, rope, or platform. The technicians work in a small group of 2-3 technicians and must bring their own lunch and toiletries to the facility.

Electrical Technicians are employed during the construction phase of the project and form part of the Operations and Maintenance team during this phase of the project. Electrical Technicians typically complete a rotational roster and work shifts of up to 12 hours a day (weather and project dependent).

Other Unit Controller Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Electrical Certification**
 - TAFE Gippsland
 - Federation University
Length: Varies according to certification obtained
- **HV Switching Certificate.**
 - Thomson Bridge, Melbourne
 - Volt Edge, Melbourne
 - Optec, Morwell
Length: 4 days
- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
Length: 4 days
- **High Risk Licencing**
 - TAFE Gippsland
Length: 1-3 days
- **Advanced First Aid**
 - Multiple providers across Victoria
Length: 2 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
Length: Approximately 3-5 hours
- **Construction Industry White Card**
 - TAFE Gippsland
Length: 2-6 hours

Further training information can be found at training.gov.au

Project Length



The Electrical Technician will be engaged during the construction phase with the amount of these types of roles increasing as more wind turbines are commissioned and become operational. These Technician roles are typically required for 25+ years during the life of an offshore wind farm and make up a large component of the O&M team.



Unit Controller to Installation Technician

Unit Controller (Coal)



Recommended qualifications/certificates

- > Trade qualified (desirable not essential)
- > Risk Assessment/JSA training certification
- > Confined Space certification
- > Working at Heights certification
- > Low Voltage rescue training with CPR certifications
- > Firefighting certifications desirable
- > Construction industry white card - desirable
- > Certificate IV in ESI Generation
- > High Voltage (HV) Switching certification
- > High Risk Licence with BS (Standard Boiler) and TO (Steam Turbine Operator) certifications
- > High risk licence with Forklift (LF), Elevated Work Platform (EWP), Basic Rigging (RB), Basic Dogging (DG) or Crane Licences (various) desirable but not essential

Required skills/experience

- > Understanding/experience in operational processes used for coal fired power station
- > Mechanical aptitude with understanding of electrical plant systems
- > Strong communication skills with capability to work effectively with all team members and stakeholder groups
- > Computer literacy with ability to company systems
- > Ability to work effectively in a small team
- > Experience working in an industrialised setting
- > Capability to work a rotational, 24 hour roster
- > Strong safety focus with ability to stop the job if unsafe

Installation Technician (Wind)



Recommended qualifications/certificates

- > **Electrical or mechanical trade qualification highly desirable***
- > GWO Basic Safety Training (BST) certification
- > E-Learning training for service lift model (turbine manufacturer specific)
- > OGUK Medical and Chester Step Test
- > MSIC Card
- > Construction industry white card (construction phase of project only)
- > Crane tickets desirable
- > Welding certificate desirable
- > Advanced First Aid

* main new qualification required for this coal position to transition to the offshore wind role

Required skills/experience

- > Previous experience in a heavy industrialised setting such as coal, oil and gas, mining or aviation
- > Mechanical and electrical understanding with capability to work on hydraulic, mechanical, braking and electrical systems of the wind turbines
- > 'Hands on' experience - capability to work on manual tasks in an offshore setting
- > Ability to work at sea in varying weather conditions
- > Welding experience highly desirable
- > Ability to read, document and report on all work activities including testing and commissioning
- > Strong communication skills with the ability to work with team members in (at times), isolated settings
- > Troubleshooting skills
- > Capability to read and follow engineering designs for installation and commissioning activities
- > Physical fitness to lift and carry large structures
- > Experience working in on a rotational roster
- > Strong safety focus with ability to stop the job if unsafe

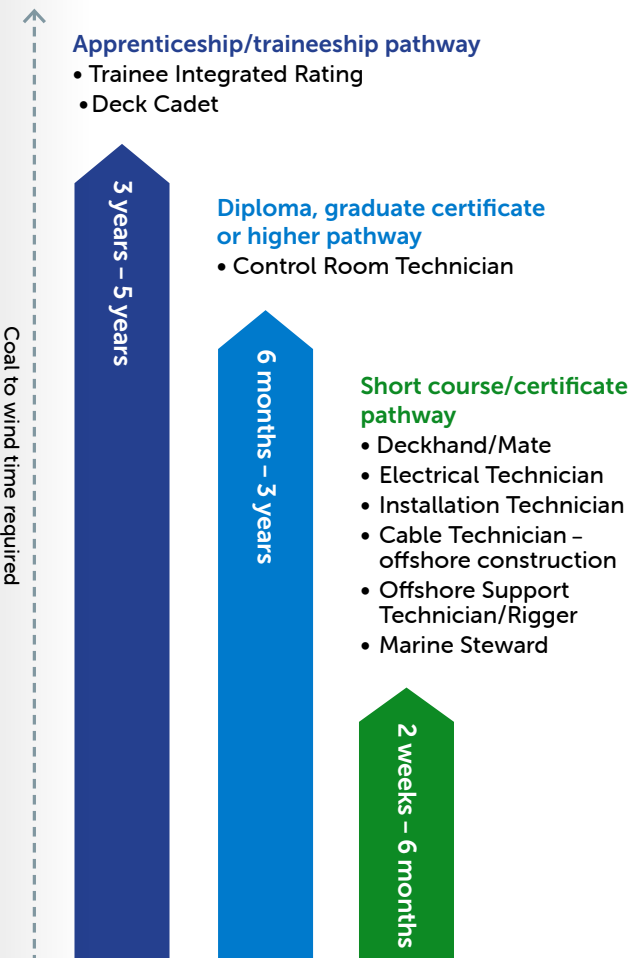
Day in the Life of an Installation Technician



An Installation Technician works offshore during the construction phase of the project and is responsible for installing the wind turbine components including blades, nacelles and towers. In addition to the installation, the technicians are also involved with testing and commissioning before the turbines becoming operational. Technicians must complete GWO wind turbine emergency training and rope access, working at heights training due to the isolation and great height of each turbine.

An Installation Technician will typically work from an offshore vessel such as a Service Operation Vessel (SOV), Light Construction Vessel (LCV) or Wind Turbine Installation Vessel (WITV) and will be on a rotational roster, working up to 12 hours a day (weather and project dependent).

Other Unit Controller Pathways



Training (Victoria)



Please note course timeframes are approximate and may vary between providers.

- **Electrical or Mechanical Certification**
 - TAFE Gippsland
 - Federation University
 - Length: Varies according to certification obtained
- **GWO Basic Safety Training (BST)**
 - Federation University, Ballarat
 - Length: 4 days
- **Crane Certifications (must be endorsed on High Risk Card)**
 - TAFE Gippsland
 - Length: varies according to certification approximately 5 days
- **Advanced First Aid**
 - Multiple providers across Victoria
 - Length: 2 days
- **OGUK Medical and Chester Step Test**
 - Multiple providers across Victoria (any GP can complete Chester Step Test)
 - Length: Approximately 3-5 hours
- **Welding qualifications**
 - TAFE Gippsland
 - Length: 1 week to 3 months depending on how it is delivered

Further training information can be found at training.gov.au

Project Length



The Installation Technician will be engaged during the construction phase of the project. Depending on the project scope this role could be required for anywhere between 1-3 years.

Transition Opportunities: Coal to Offshore Wind



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