22515VIC
Course in Working Safely in the Solar Industry

Version 3 – September 2022

This course has been accredited under Part 4.4 of the Education and Training Reform Act 2006
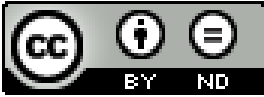
Accredited for the period: 1 July 2019 to 30 June 2024

Course modification history:

Version 3 September 2022	• Course structure updated to reflect current first aid unit *HLTAID011 Provide first aid*, which replaces the non-equivalent unit *HLTAID003 Provide first aid*. This supports the decision of national and state VET Regulators to ensure delivery of current first aid units within Victorian Crown Copyright courses. Please refer to the *ASQA website*.
	• Unit *CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry* replaced with *CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry* to reflect VRQA accreditation and align with listing on the National Register of VET.
	• Copyright arrangements and representative and day to day contact details updated
Version 2 August 2020	• Purpose of the course (Item 2.1) amended
	• Course entry requirements (Item 5.2) amended
	• Minor amendments to text in unit VU22744
Version 1	Initial accreditation by VRQA

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Section A: Copyright and course classification information

1. **Copyright owner of the course**	Copyright of this course is held by the Department of Education and Training, Victoria. © State of Victoria (Department of Education and Training) 2019
2. **Address**	**Executive Director** Higher Education and Workforce Division Higher Education and Skills Department of Education and Training (DET) GPO Box 4367 MELBOURNE Vic 3001 **Organisational Contact:** Manager, Training and Learning Products Unit Portfolio Alignment Branch Higher Education and Workforce Division Higher Education and Skills Department of Education and Training (DET) Telephone: 131823 Email: course.enquiry@education.vic.gov.au **Day to day contact:** Curriculum Maintenance Manager – Building Industries Holmesglen Institute PO Box 42 HOLMESGLEN VIC 3148 Telephone: (03) 9564 1987 Email: *teresa.signorello@holmesglen.edu.au*
3. **Type of submission**	Initial Accreditation.
4. **Copyright acknowledgement**	Copyright of the following units of competency from nationally endorsed training packages is administered by the Commonwealth of Australia and can be accessed from Training.gov (see website here). © Commonwealth of Australia CPP Property Services Training Package

	- CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
	- CPCCCM2010B Work safely at heights
	- CPCCWHS1001 Prepare to work safely in the construction industry
	HLT Health Training Package
	- HLTAID011 Provide first aid
5. Licensing and franchise	Copyright of this material is reserved to the Crown in the right of the State of Victoria. © State of Victoria (Department of Education and Training) 2019.
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	You are free to re-use the work under that licence, on the condition that you credit the State of Victoria (Department of Education and Training), provide a link to the licence, indicate if changes were made, and comply with all other licence terms. You must not distribute modified material.
	Request for other use should be addressed to:
	Executive Director Higher Education and Workforce Division Higher Education and Skills Department of Education and Training (DET) GPO Box 4367 Melbourne 3001
	Email: *course.enquiry@education.vic.gov.au*
	Copies of this publication can be downloaded free of charge from the *DET website*.
6. Course accrediting body	Victorian Registration and Qualifications Authority
7. AVETMISS information	ANZSCO code 312999 – Building and Engineering Technicians nec ASCED Code 0403 – Building National course code 22515VIC
8. Period of accreditation	1 July 2019 to 30 June 2024

Section B: Course information

1. Nomenclature	***Standard 1 AQTF Standards for Accredited Courses***
Name of the qualification	Course in Working Safely in the Solar Industry
Nominal duration of the course	64 hours

2. Vocational or educational outcomes	***Standard 1 AQTF Standards for Accredited Courses***
Purpose of the course	The *Course in Working Safely in the Solar Industry* provides an accredited training program and vocational outcomes for persons wishing to gain the skills and knowledge required to work safely in the solar industry.
	On completion participants working with photovoltaic (PV) systems and solar water systems will have the skills and knowledge to:
	• Work safely on roofs
	• Work safely at heights
	• Identify and report asbestos

3. Development of the course	***Standards 1 and 2 AQTF Standards for Accredited Courses***
Industry/enterprise/ community/education needs	Data confirms that Australia is experiencing a rooftop solar panel installation boom. Solar Victoria is an organisation that has been established by the Victoria Government to manage the installation of solar panels and facilitate the rebate to house holders who participate in the government Solar Rebate Program.
	The Australian and State/Territory governments are also working to phase-out greenhouse-intensive water heaters. As a result of the phase-out and the availability of government incentives, the number of solar water heaters being installed has increased. This change to the water heating market has increased industry and public awareness of what constitutes compliant installations.
	Given the anticipated growth of the programs, the Victorian Government, through the Victorian Skills Commissioner, has identified the need to develop and accredit a safety training course to ensure the safety of solar panel/water collectors installers working in solar and plumbing industry.
	Currently installers are required to complete working at heights certification to be eligible for industry accreditation i.e. Clean Energy Council, however there is no industry

specific safety training available for solar panel/solar collector installers.

The proposed course is designed to address the work, health and safety knowledge and skill requirements by developing a course specifically contextualised for the solar industry. The Course in Working Safely in the Solar Industry provides the skill set required by installers to be able to work safely at heights and on roofs with the required equipment.

The course will ensure workers understand the required industry standards and the implications of safety hazards that may arise in the workplace.

A Project Steering Committee was established to advise on the industry need and development of the course and to confirm its alignment to industry current and future needs.

Members of the steering committee:

Brian Chamberlin	Worksafe (Chairperson)
Deborah Simmons	Sustainability Victoria
Carmel Veenstra	Future Energy Skills
Mary-Anne Coffey	Clean Energy Council
Vanessa Garbett	Energy Safe Victoria
Kris Gretgrix	Electrical Trades Union (ETU)
Shane Clayton	Gippsland Solar
Chan Sinnadurai	Energy Australia
Rob Peyerl	National Electrical Contractors Association (NECA)
Robbie Nichols	Green Earth Electrical
Glenn Menzies	Plumbing and Pipes Trades Employee Union
Brendan Gould	Master Plumbers Association

In Attendance:

Cameron Ellis	Worksafe Victoria
George Adda	Box Hill Institute
Teresa Signorello	Holmesglen institute
Vince Rio	Box Hill Institute

The Course in Working Safely in the Solar Industry:

- does not duplicate, by title or coverage, the outcomes of an endorsed training package qualification

- is not a subset of a single training package qualification that could be recognised through one or more statements of attainment or a skill set

- does not include units of competency additional to those in a training package qualification that could be recognised through statements of attainment in addition to the qualification

- does not comprise units that duplicate units of competency of a training package qualification.

Review for re-accreditation	Not Applicable			
4. Course outcomes	***Standards 1, 2, 3 and 4 AQTF Standards for Accredited Courses***			
Qualification level	The Course in Working Safely in the Solar Industry will meet an identified industry need, but does not have the breadth, depth or volume of learning of a qualification.			
Employability skills	Not Applicable			
Recognition given to the course (if applicable)	Not Applicable			
Licensing/ regulatory requirements ***(if applicable)***	**Standard 5 AQTF Standards for Accredited Courses** Not Applicable			
5. Course rules	***Standards 2, 6, 7 and 9 AQTF Standards for Accredited Courses***			

Course structure

The Course in Working Safely in the Solar Industry consists of five core units of competency as indicated in Table 1.

To be awarded the Course in Working Safely in the Solar Industry participants must successfully complete all core units.

Participants, who exit the course without completing all the required units for the course will receive a Statement of Attainment listing those units that were successfully completed.

The core units were mandated by the industry steering committee as all the knowledge and skills required to work safely and competently in the Solar Industry.

Table 1 - Course in Working Safely in the Solar Industry – Core

Unit of competency code	Field of Education code (six-digit)	Unit of competency title	Pre-requisite	Nominal hours
Core units				
VU22744	040301	Work safely in the solar industry	Nil	12
CPCCWHS2001	061301	Apply WHS requirements, policies and procedures in the construction industry	Nil	20
CPCCCM2010B	061301	Work safely at heights	CPCCOHS2001A	8
CPCCWHS1001	061301	Prepare to work safely in the construction industry	Nil	6
HLTAID011	069907	Provide first aid	Nil	18
			Total nominal hours	**64**

Entry requirements	**Standard 9 AQTF Standards for Accredited Courses**
	There are no essential entry requirements for this course. However, learners are best equipped to achieve the outcomes of the course in Working Safely in the Solar Industry, if they have minimum language, literacy and numeracy skills that are equivalent to level 3 of the Australian Core Skills Framework (ACSF).Details can be found on the website: *http://www.acsf.deewr.gov.au* .

Learners who do not meet the minimum language, literacy and numeracy requirement may require additional support to complete the course. |
| **6. Assessment** | ***Standards 10 and 12 AQTF Standards for Accredited Courses*** |
| *Assessment strategy* | **Standard 10 AQTF Standards for Accredited Courses**

All assessment, including Recognition of Prior Learning (RPL), must be compliant with the requirements of:

Standard 1 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guidelines 4.1 and 4.2 of the VRQA Guidelines for VET Providers,

or

the Standards for Registered Training Organisations 2015 (SRTOs),

or

the relevant standards and Guidelines for RTOs at the time of assessment.

Assessment strategies must therefore ensure that:
- all assessments are valid, reliable, flexible and fair
- learners are informed of the context and purpose of the assessment and the assessment process
- feedback is provided to learners about the outcomes of the assessment process and guidance given for future options
- time allowance to complete a task is reasonable and specified to reflect the industry context in which the task takes place

Assessment strategies should be designed to:
- cover a range of skills and knowledge required to demonstrate achievement of the course aim
- collect evidence on a number of occasions to suit a variety of contexts and situations
- be appropriate to the knowledge, skills, methods of delivery and needs and characteristics of learners
- be equitable to all groups of learners

Assessment methods are included in each unit and include:
- oral and/or written questioning
- inspection of final process outcomes
- portfolio of documented on-site work evidence |

	• practical demonstration of required physical tasks • investigative research and case study analysis
	While the Evidence Guide in each unit provides information specific to the unit outcomes a holistic approach to assessment is encouraged. This may be achieved by combining the assessment of more than one unit where it better replicates working practice. Units maybe assessed on-the-job, off-the-job or a combination of both. Where assessment occurs off-the-job, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. Assessment of the imported endorsed units must reflect the Assessment Requirements for the relevant training packages.
Assessor competencies	**Standard 12 AQTF Standards for Accredited Courses** Assessment must be undertaken by a person or persons in accordance with: Standard 1.4 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guidelines 3 of the VRQA Guidelines for VET Providers, or the Standards for Registered Training Organisations 2015 (SRTOs), or the relevant standards and Guidelines for RTOs at the time of assessment. Assessors of the units of competency imported from training packages must reflect the requirements for assessors specified in that training package.
7. Delivery	***Standards 11 and 12 AQTF Standards for Accredited Courses***
Delivery modes	**Standard 11 AQTF Standards for Accredited Courses** Delivery strategies should be selected to reflect the nature of the industry specific competencies and the need of the learner. Due to the potential for a dispersed distribution of learners, course providers may wish to consider non-traditional strategies in the delivery of training. The achievement of competencies through workplace activities or on-the-job training should be fostered and encouraged where possible. It is recommended that the courses be conducted using project based delivery and assessment methods involving the clustering of units, to maximise opportunities for learners to have learning experiences which are as close as possible to a real-work environment. Delivery methods may include, but are not limited to:

		• classroom presentation • work-based projects • practical demonstration of work • learning encompassing the clustering of units Delivery of the imported endorsed and accredited units of competency must be consistent with the guidelines in the relevant training package or accredited course.
	Resources	**Standard 12 AQTF Standards for Accredited Courses** Successful delivery of this course requires access to solar panel/water collectors and associated equipment. For this to occur, providers and industry enterprises may form partnerships to deliver realistic and authentic training and assessment. The resources that should be available for these courses relate to normal work practice using procedures, information and resources typical of a workplace. This must include: • WHS/OHS policy and work procedures and instructions • personal protective equipment • access to realistic workplace environments • realistic roof structures clad with tiles, slat and metal sheeting • building tools and safety equipment • access to solar panels or water collectors • relevant installation materials and equipment • fall and perimeter protection barriers where required to be fitted • relevant manufacturers' specifications and/or manuals. Training must be undertaken by a person or persons in accordance with: Standard 1.4 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guideline 3 of the VRQA Guidelines for VET Providers, or the Standards for Registered Training Organisations 2015 (SRTOs), or the relevant standards and Guidelines for RTOs at the time of assessment.
8. Pathways and articulation		*Standard 8 AQTF Standards for Accredited Courses*
		Applicants who have already successfully completed any endorsed unit of competency from previous study will receive direct credit transfer for the same unit/s in this course. Graduates of this course will also gain direct credit transfer of

| | units successfully completed in any future courses containing the same units.

There are no formal articulation arrangements negotiated and established for the Course in Working Safely in the Solar Industry with higher education courses.

Providers intending to arrange articulation with other VET or higher education course should refer to the:

[AQF Second Edition 2013 Pathways Policy](#) |
| --- | --- |
| **9. Ongoing monitoring and evaluation** | ***Standard 13 AQTF Standards for Accredited Courses*** |
| | The Curriculum Maintenance Manager - Building Industries is responsible for the ongoing monitoring and maintenance of the course during its accreditation period.

The Curriculum Maintenance Manager - Building Industries will undertake a formal review of the course at the mid - point of the accreditation period. The review will involve consultation with:

- course participants and graduates
- regulators, unions, contractor associations and WorkSafe
- teaching/assessing staff

Any significant changes to the course resulting from the review will be reported to the VRQA through a formal amendment process.

The review of the course may also indicate that the course should be expired if a suitable qualification becomes available through the continuous improvement of a relevant Training Package. |

Section C–Units of competency

Imported units of competency from the relevant Endorsed Training Packages are available from the national register _here._

CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry
CPCCCM2010B	Work safely at heights
CPCCWHS1001	Prepare to work safely in the construction industry
HLTAID011	Provide first aid

Newly developed unit of competency:

VU22744	Work safely in the solar industry

VU22744 – Work safely in the solar industry

| Unit Descriptor | This unit describes the skills and knowledge to work safely in the solar industry. Specifically, the unit covers preparation, identification of work requirements, working safely at heights, including with fall protection and perimeter prevention equipment and handling relevant loads.

No licensing or certification requirements apply to this unit at the time of accreditation. |

| **Pre-requisite** | Nil |
| **Application of the Unit** | This unit is applicable to individuals working in the solar industry installing PV solar panel, solar water panels and associated equipment. |

ELEMENT	PERFORMANCE CRITERIA	
1. Prepare to work in the solar industry	1.1	Identify industry structure, occupations, job roles and work environment for employment opportunities in meeting government priorities
	1.2	Identify relevant employment conditions, organisational requirements, responsibilities and duties related to jobs and career paths in the solar industry
	1.3	Examine relevant trends in solar technology, work processes and environmental issues which impact on the solar industry and employment opportunities
2. Plan and prepare for solar installation	2.1	Confirm relevant ***Occupational Health and Safety (OHS)/Workplace Health and Safety (WHS)*** and ***environmental protection*** requirements are identified, recorded and put into place prior to the commencement of work
	2.2	Participate in the development of compliance to relevant safe work method statements (SWMS) in accordance with organisational and OHS/WHS regulatory requirements
	2.3	Confirm installation timeframe, scope of work, site conditions, ***materials, tools and equipment*** for the installation are compatible with maintaining safety and available on site
	2.4	Read, interpret and confirm requirements for relevant solar installation according to manufacturers' assembly specifications and guidelines
	2.5	Confirm working at heights control measures conform with the prevention of falls hierarchy of control measures
	2.6	Confirm fall protection equipment anchor points, lines and harnesses are set-up and operated only by ***competent personnel***

		2.7	Confirm relevant *personal protective equipment (PPE)* and relevant clothing are applied in accordance with Safe Work Method Statements (SWMS) organisational safety and requirements
3.	Evaluate work area requirements	3.1	Confirm work area access and egress for solar installation is suitable and safe for the task
		3.2	Establish correct and safe access to work area
		3.3	Identify relevant workplace *hazards* and *hazardous materials*
		3.4	Inspect worksite layout and work environment, including relevant weather conditions, equipment requirements and compliance with SWMS
		3.5	Identify and report on asbestos materials in accordance with organisational, OHS/WHS and regulatory requirements
		3.6	Assess roof incline and *roof structure* integrity to ensure safe working conditions and compliance with safe work method statement (SWMS), OHS/WHS requirements and organisational procedures
		3.7	Identify relevant fall protection and perimeter protection equipment is installed where required and in accordance with safe work method statement (SWMS) and OHS/WHS regulatory requirements
4.	Access solar installation work area	4.1	Check that building and safety equipment for work to be undertaken is in accordance with workplace approved procedures
		4.2	Confirm that personal fall protection equipment is used only by trained and competent personnel
		4.3	Check proper fitment of fall protection equipment prior to working at heights, including: appropriate PPE and working at heights head protection
		4.4	Check materials, tools and equipment are placed in a safe location to control risk of items falling and becoming a hazard to persons working below
		4.5	Use relevant manual handling method for moving tools, equipment and materials to work area in accordance with organisational safety and installation requirements
5.	Perform solar installation work tasks	5.1	Fall protection equipment is continuously maintained and adjusted with movement to ensure protection is not compromised or diminished by movement through work area
		5.2	Use workplace and installation materials, tools and equipment at the worksite within the limits of the job role and in accordance with organisational and manufacturer's specifications and guidelines
		5.3	Identify compliance with relevant lock out and energisation procedures where implemented

6. Complete work tasks	6.1	Confirm and document installation completion and/or maintenance requirements of relevant components
	6.2	Clean work area and dispose of, reuse or recycle materials according to legislation, regulations, codes of practice and job specifications
	6.3	Clean, check and store relevant tools and equipment according to manufacturer recommendations and workplace procedures
	6.4	Finalise relevant reporting and/or recording according to workplace requirements

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- communicating skills to record, report and share workplace information, including safety issues
- identifying hazards
- identifying asbestos containing materials
- interpreting Occupational Health and Safety (OHS*)/Workplace Health and Safety* (WHS) and environmental protection requirements
- contributing to the development of relevant safe work method statements (SWMS)
- working safely at heights
- working safely on roofs
- working with fall and perimeter protection equipment
- using personal protective equipment correctly
- applying manual handling procedures correctly

Required knowledge:

- relevant standards and manufacturer' specifications and guidelines associated with solar products
- relevant legislative environmental protection and OHS requirements and practices
- organisation procedures associated with workplace safety
- understanding of basic assembly and installation principles and structures of solar collector products
- application of building and fixing materials and their effects on construction performance
- sustainable building practices and waste management processes
- manual handling procedures
- hand and power tools for solar installation
- working in a range of weather conditions
- composition of safe work method statements (SWMS) including rescue plan
- asbestos containing materials
- lockout and energisation procedures

Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below

| *Occupational Health and Safety (OHS)/Workplace Health* | - relevant legislation, relevant Acts and National Occupational Health and Safety (NOHS) guidelines |
| | - scaffolding |

and Safety (WHS) requirements includes but are not limited:

- material safety management systems
- safe work method statements (SWMS)
- hazardous substances and dangerous goods codes & control measures used
- worksite safe operating procedures & risk management
- handling of materials
- hazard control, including electrical hazards
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including recognising and preventing hazards associated with:
  - hazardous materials and substances
  - photovoltaic (solar) panels
  - service lines
  - surrounding structures and facilities
  - trip hazards
  - use of tools and equipment
  - work site visitors/public
  - working at heights
  - working in proximity to others
- use of firefighting equipment
- use of first aid equipment

Environmental protection requirements may include:

- clean-up protection to existing structures and materials
- ozone protection
- waste management
- noise & dust pollution
- worksite operating hours
- use & storage of hazardous materials
- protection of natural environment
- relevant legislation

Materials, tools and equipment includes but is not limited to:

- hand & power tools
- fall & perimeter protection
- equipment belts
- scaffolds
- ladders
- lifting & load shifting equipment
- hoists & jacks
- 240v power supplies
- Compressor
- Generator
- pneumatic driven equipment
- solar panels
- solar collectors

	• use of covers for solar collectors during installation
	• Lock out tag out items
	• elevated platforms/hoists

Competent personnel includes but is not limited to:	• worksite staff trained to erect, operate, maintain and dissemble fall prevention barriers and associated equipment

Personal protective equipment (PPE) includes but is not limited to:	• ear muffs/plugs
	• high visibility reflective vests
	• jackets
	• clothing
	• safety glasses/goggles
	• steel capped boots
	• dust masks/respirator

Hazards may include:	• ambient temperature
	• working in heat & cold climatic conditions
	• wet/dry weather conditions
	• working times
	• work sites
	• construction activity
	• mobile worker and contractors
	• electrical equipment
	• energy sources
	• equipment and materials
	• trenches & excavations
	• hazardous materials
	• ultra violet light
	• manual handling or lifting of tools or equipment being installed
	• moisture
	• noise
	• stationary & moving plant
	• working at heights
	• working in confined spaces
	• protrusions, sharp materials & products

Hazardous materials includes but is not limited to:	• dust & vapours
	• asbestos containing materials
	• hazardous chemicals
	• building materials
	• liquids/gases under pressure

Roof structure may include:	• lifting & working on roofs
	• relevant laws & legislation relevant to roof design and construction
	• relevant safety & skills training associated with working on roofs

- range of roof inclines, including steeper than 45degrees
- use of fall & perimeter protection barriers
- integrity building structure to support loads, including installer & equipment
- strengthening roof structures to support additional loads where required
- stability, fragility, brittleness of roof covering material
- walking on slippery roof surfaces
- tiled, slat and metal sheeting

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the accreditation submission.

Critical aspects for assessment and evidence required to assess competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the ability to: - apply and work in accordance with Occupational Health and Safety (OHS) / Workplace Health and Safety (WHS) and environmental protection requirements - work safely at heights - confirm work task requirements and nature of the worksite to ensure safety to self and others - ensure worksite has safe access and return from work area - use personal protective equipment, including relevant hand and power tools correctly - use fall protection equipment where required - use and work safely within perimeter protection barriers where fitted - report on asbestos materials on worksite where evident - safely perform relevant work tasks associated with solar installations
Context of and specific resources for assessment	Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources. Assessment must ensure access to: - Personal protective equipment (PPE) - Relevant materials, workplace tools and equipment, including worksite specific ladders, scaffolds, hoists etc - Relevant hand and power tools - Solar installation materials and products.

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced working on work sites for the solar industry.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation of candidate working at heights in a real workplace setting or simulated environment;
- oral and/or written questioning on required knowledge and skills;
- review of portfolio of documentary evidence of the candidate;
- review of third-party workplace reports of on-the-job by the candidate.