Australian Government

UEERE0032 Design wind energy conversion systems (WECS) rated to 10 kW

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to design wind energy conversion system (WECS) rated to 10 kilowatt (kW) and its installation.

It includes determining and developing WECS design, following design briefs, documenting design calculations and criteria, and obtaining design approval for WECS.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEECD0043 Solve problems in direct current circuits

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in electromagnetic devices

UEERE0047 Solve problems in wind energy conversion systems (WECS) rated to 10 kW

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to design WECS	**1.1** Work health and safety (WHS)/occupational health and

		safety (OHS) processes and workplace procedures for a given work area are identified, obtained and applied
	1.2	Scope of the WECS is determined from design brief
	1.3	Safety and regulatory requirements to which the electrical installation must comply are identified, obtained and applied
	1.4	Design development work is planned to meet scheduled timelines in consultation with relevant person/s involved in the WECS installation or associated work
2 Develop WECS design	**2.1**	WECS performance standards and compliance methods are applied to the design
	2.2	Alternative WECS designs are considered in accordance with the design brief
	2.3	Safety, functionality and budgetary considerations are incorporated in the WECS design
	2.4	WECS design is drafted and checked for compliance with the design brief and regulatory requirements
	2.5	WECS design is documented for submission to relevant person/s for acceptance and approval
	2.6	Unplanned situations are dealt with safely and effectively in accordance with workplace procedures
3 Obtain design approval for WECS	**3.1**	WECS design is presented and any issues clarified with client representative and/or relevant person/s
	3.2	Requests for alterations to the design are negotiated with relevant person/s within the constraints of workplace policies
	3.3	Final design is documented and approval obtained from relevant person/s
	3.4	Quality of work is monitored in accordance with relevant performance agreement and/or workplace procedures or industry standards

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Designing WECS must include at least the following:

- two different WECS and their installation

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK131A Design wind energy conversion systems (WECS) rated to 10 kW.

Links

Companion Volume implementation guides are found in VETNet - - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6