



Australian  
Industry and  
Skills Committee

# UEE RENEWABLES

Case for Change

Name of allocated IRC(s): Electrotechnology  
Name of the SSO: Australian Industry Standards

## 1. Administrative information

*For a list of the products proposed to be reviewed as part of this project, please see Attachment A.*

Name of IRC(s):	Electrotechnology
Name of SSO:	Australian Industry Standards

### 1.1 Name and code of Training Package(s) examined to determine change is required

UEE Electrotechnology

## 2. The Case for Change

*For information on the job roles to be supported through the proposed qualifications updates, enrolments data, completion rates, and the number of RTOs delivering these qualifications please see Attachment B.*

### 2.1 Rationale for change

During transition of the UEE Training Package several issues were identified by stakeholders which fell outside of the scope of the transition project.

It was identified that all qualifications related to renewables were no longer fit for purpose because they contain outdated content. The review will update these qualifications and related units and skill sets to reflect current technologies, industry practices, regulations, and accreditation.

Most of this content was last updated over 10 years ago. Renewable systems, technology and industry practices have evolved significantly since that update.

All renewables content was a straight transition into the new templates for compliance with the 2012 Standards for Training Packages. The transition project did not allow for a review of content.

Renewable energy developers and installers are facing challenges in recruiting skilled and experienced workers. The Electrotechnology workforce will need to have the necessary skills for the installation and maintenance of renewable energy technologies to provide new services to domestic and commercial customers. To meet demand, industry will need to focus on skills and training, and continue to create career pathways for workers.

### 2.2 Evidence for change

Solar installation has been steadily growing with currently over two and a half million installations in Australia, which is anticipated to double by the mid-2020s. Investments in solar and other renewables can jumpstart Australia's economic recovery from the pandemic. The renewable sector has the potential to employ over 44,000 by 2025. With the right policy settings, regional areas are poised to benefit as about 70 per cent of these jobs could be in regional Australia by 2025. As many as 50 per cent of clean energy jobs are projected to be in operation and maintenance by 2035. The industry has emphasised the role of training and upskilling workers to leverage from these opportunities.

### 2.3 Consideration of existing products

Existing units of competency will be reviewed to bring them in line with current industry practice.

The suitability of units that can be imported from other industry training packages to cover transferable skills will be considered.

## 2.4 Approach to streamlining and rationalisation of the training products being reviewed

The units to be reviewed in this project primarily cover specific technical skills and knowledge required of workers.

Imported units will be considered where possible for transferrable skills and knowledge.

Any nested content contained in qualifications in this pathway will be removed and replaced with entry requirements or replaced.

## 3. Stakeholder consultation

### 3.1 Stakeholder consultation undertaken in the development of Case for Change

*For a full list of industry-specific stakeholders that actively participated in the stakeholder consultation process undertaken to develop the Case for Change, please see **Attachment C**.*

The need for a review of these qualifications was identified during the broad consultation conducted for Release 2.0 of the UEE Electrotechnology Training Package.

Development of the Case for Change involved consultation with stakeholders via the following communication mechanisms:

- Stakeholder webinars
- Face to Face meetings (Virtual)
- AIS Website
- Stakeholder networks
- Teleconferences
- Emails

The work was outlined during a webinar which included representatives from all States/Territories and regional areas of those jurisdictions. Feedback on the proposed work was invited during the webinar.

The work was posted in the Engagement Hub of the AIS website and feedback invited.

Notification of the opportunity to provide feedback through the Electrotechnology webinar, or in writing through the Engagement Hub, was provided to over 1,100 Electrotechnology sector stakeholder subscribers.

### 3.2 Evidence of Industry Support

*For a list of the issues raised by stakeholders during consultation and the IRC's response to these, please see **Attachment D**.*

No objections to the proposed review were raised during the consultation process. There is strong support for the review because the current qualifications and units of competency are not fit for purpose and their content significantly out of date.

The work was outlined during a webinar conducted for the Electrotechnology industry on 26 March 2021 which had 80 participants. The proposed work was also detailed in the Engagement Hub of the AIS website for stakeholders to review and provide feedback, and no issues were raised in response.

### 3.3 Proposed stakeholder consultation strategy for project

*Note: For a full list of industry-specific stakeholders who are planned to be contacted to participate in the stakeholder consultation process undertaken for this project, please see Attachment E.*

Key Industry stakeholders will be identified in consultation with industry regulators, associations, and the Electrotechnology IRC.

A general invitation to participate on the project Technical Advisory Committee (TAC) will be sent to all Electrotechnology subscribers. Targeted invitations will also be sent to known technical experts.

AIS, on behalf of the Electrotechnology IRC, will promote the opportunity to contribute through stakeholder webinars, the AIS website, EDM's, AIS newsletter and public notifications. Stakeholders will also be notified of key milestones throughout the life of the project, including requests for feedback on draft materials.

Stakeholder engagement and consultation will occur over the life of the project via a combination of the following methods:

- Direct engagement: Face to face consultations, Site visits, Phone, emails, video/teleconferencing meetings
- Industry forums and conferences
- Webinars
- Online feedback mechanisms
- STA direct engagement

Given the size of Australia and all stakeholders are not centrally located in major cities, a range of consultation strategies will be used so stakeholders in rural, regional and remote areas, and in smaller jurisdictions have multiple avenues to provide feedback.

This includes but is not limited to, online/video consultation, email correspondence and promotional activity via targeted communications including social media. A recently developed Engagement hub on the AIS website provides a one stop portal for information about how all stakeholders can participate and inform Training Package development work.

#### **4. Licencing or regulatory linkages**

No licencing or regulatory implications.

Some units lead to industry accreditations.

#### **5. Project implementation**

##### **5.1 Prioritisation category**

It is proposed that this be complex review conducted over an eighteen-month period to enable considered review of a large amount of highly technical content.

Release 2.0 of the UEE Training Package was primarily a transition project and did not include the review of content in its scope. The need for this review was identified during the transition of UEE11 content which was identified as substantially out of date.

##### **5.2 Project milestones**

Key project milestones include:

- AISC project approval: June 2021
- Technical Advisory Committee (TAC) formed: August 2021

- Draft 1 consultation: April-May 2022
- Stakeholder validation: August-September 2022
- Quality Assurance: September-October 2022
- Final consultation with states and territories: October-November 2022
- Case for Endorsement submitted for approval: 31 December 2022

### 5.3 Delivery or implementation issues

None have been identified to date.

## 6. Implementing the Skills Minister’s Priority reforms for Training Packages (2015 and October 2020)

The project submission will support industry’s expectations for training delivery and provide a revised Companion Volume Implementation Guide (CVIG) to support delivery of the new products.

Consideration of imported units will be a focus of this project.

Existing Skill Sets will be updated, and possibly new ones created if required.

This Case for Change was agreed to by the Electrotechnology IRC

Name of Chair

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Signature of Chair

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Date

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## Attachment A: Training Package components to change

Australian Industry Standards

Contact details: David Dixon, Chief Operating Officer

Date submitted: TBA

Note: qualifications where the code is marked with \* are not being reviewed, but contain units that are being reviewed as part of this project, as such may need to be submitted for endorsement due to the update.

Project number	Project Name	Qualification / Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Qualification	UEE32020Y	Certificate III in Renewable Energy – ELV	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE41620Y	Certificate IV in Renewable Energy	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE41920Y	Certificate IV in Electrical - Renewable Energy	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE42020Y	Certificate IV in Electrical - Photovoltaic systems	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE43120Y	Certificate IV in Energy Efficiency and Assessment	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE50720Y	Diploma of Renewable Energy Engineering	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Qualification	UEE60920Y	Advanced Diploma of Renewable Energy Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	UEE62020Y	Advanced Diploma of Engineering Technology - Renewable Energy	05/Oct/2020 - Transition	Update
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE10120Y</i>	<i>Certificate I in ElectroComms Skills</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE20520Y</i>	<i>Certificate II in Computer Assembly and Repair</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE20720Y</i>	<i>Certificate II in Data and Voice Communications</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE20920Y</i>	<i>Certificate II in Electronic Assembly</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE21420Y</i>	<i>Certificate II in Remote Area Power Supply Maintenance</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE22120Y</i>	<i>Certificate II in Sustainable Energy (Career Start)</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>
8	<i>Renewables</i>	<i>Qualification</i>	<i>* UEE30220Y</i>	<i>Certificate III in Computer Systems Equipment</i>	<i>05/Oct/2020 - Transition</i>	<i>Update</i>

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Qualification	*UEE30620Y	Certificate III in Electrical Machine Repair	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE30720Y	Certificate III in Switchgear and Controlgear	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE30820Y	Certificate III in Electrotechnology Electrician	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE33020Y	Certificate III in Electrical Fitting	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE40120Y	Certificate IV in Computer Systems	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE40220Y	Certificate IV in Electrical - Data and Voice Communications	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE40320Y	Certificate IV in Installation Inspection and Audits	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE40620Y	Certificate IV in Electrotechnology - Systems Electrician	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE41020Y	Certificate IV in Energy Management and Control	05/Oct/2020 - Transition	Update



Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Qualification	*UEE41220Y	Certificate IV in Electrical – Rail Signalling	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE42120Y	Certificate IV in Electrotechnology - Electrical Contracting	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE42620Y	Certificate IV in Hazardous areas - Electrical	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE43020Y	Certificate IV in Electrical Equipment and Systems	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE50120Y	Diploma of Computer Systems Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE50420Y	Diploma of Electrical Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE51120Y	Diploma of Engineering Technology - Refrigeration and Air Conditioning	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE53020Y	Diploma of Electrical Systems Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE61220Y	Advanced Diploma of Engineering - Explosion protection	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Qualification	*UEE62120Y	Advanced Diploma of Engineering Technology - Electrical	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE62220Y	Advanced Diploma of Electrical - Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE62320Y	Advanced Diploma of Electrical Engineering - Coal Mining	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE62420Y	Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration	05/Oct/2020 - Transition	Update
8	Renewables	Qualification	*UEE63020Y	Advanced Diploma of Electrical Systems Engineering	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0001Y	Apply environmentally and sustainable procedures in the energy sector	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0002Y	Assemble and connect remote area power supplies	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0003Y	Assess energy loads and uses for energy efficiency in commercial facilities	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0004Y	Assess energy loads and uses for energy efficiency in industrial properties and enterprises	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Unit	UEERE0005Y	Assess energy loads and uses for energy efficiency in residential, office and retail premises	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0006Y	Conduct periodic maintenance of remote area power supply battery banks	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0007Y	Conduct periodic maintenance of remote area power supply generator sets	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0008Y	Conduct periodic maintenance of remote area power supply photovoltaic arrays	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0009Y	Conduct periodic maintenance of remote area power supply wind generators	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0010Y	Design energy management controls for electrical installations in buildings	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0011Y	Design grid-connected photovoltaic power supply systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0012Y	Develop effective engineering strategies for energy reduction in buildings	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Unit	UEERE0013Y	Develop strategies to address environmental and sustainability issues in the energy sector	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0014Y	Develop strategies to address sustainability issues for electrical installations	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0015Y	Implement and monitor energy sector environmental and sustainable policies and procedures	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0016Y	Install, configure and commission LV grid-connected photovoltaic power systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0017Y	Maintain and repair facilities associated with remote area essential service operations	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0018Y	Maintain and repair remote area power generation facilities	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0019Y	Maintain safety and tidiness of remote area power supply systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0020Y	Promote sustainable energy practices in the community	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Unit	UEERE0021Y	Provide basic sustainable energy solutions for energy reduction in residential premises	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0022Y	Solve basic problems in photovoltaic energy apparatus and systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0023Y	Work safely with remote area power supply systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0024Y	Attend to breakdowns in remote area power supplies (RAPS)	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0025Y	Carry out basic repairs to renewable energy (RE) apparatus	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0026Y	Conduct checks in the demand side use of remote area power supplies (RAPS)	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0027Y	Coordinate maintenance of renewable energy (RE) apparatus and systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0028Y	Design hybrid renewable power systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0029Y	Design micro-hydro systems rated to 6.4 kW	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Unit	UEERE0030Y	Design renewable energy (RE) heating systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0031Y	Design stand-alone renewable energy (RE) systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0032Y	Design wind energy conversion systems (WECS) rated to 10 kW	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0033Y	Develop engineering solutions to renewable energy (RE) problems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0034Y	Diagnose and rectify faults in renewable energy (RE) control systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0035Y	Install ELV stand-alone photovoltaic power systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0036Y	Install small wind energy conversion systems rated up to 10 kW for ELV standalone applications	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0037Y	Install, configure and commission LV micro-hydro systems rated up to 6.4 kW	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
8	Renewables	Unit	UEERE0038Y	Install, configure and commission LV wind energy conversion systems rated up to 10 kW	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0039Y	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0040Y	Maintain and monitor remote area essential service operations	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0041Y	Maintain operation of remote area power generation plant	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0042Y	Manage renewable energy (RE) projects	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0043Y	Plan periodic maintenance schedules of remote area power supplies (RAPS)	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0044Y	Plan renewable energy (RE) projects	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0045Y	Solve basic problems in micro-hydro systems	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0046Y	Solve problems in stand-alone renewable energy (RE) systems	05/Oct/2020 - Transition	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review <i>(endorsement date, nature of this update transition, review, establishment)</i>	Change Required
8	Renewables	Unit	UEERE0047Y	Solve problems in wind energy conversion systems (WECS) rated up to 10 kW	05/Oct/2020 - Transition	Update
8	Renewables	Unit	UEERE0048Y	Verify compliance and functionality of an extra-low voltage renewable energy installation	05/Oct/2020 - Transition	Update



## Attachment B: Job role, enrolment information, the number of RTOs currently delivering these qualifications

Please set out the job roles to be supported through the updated qualifications, enrolment data over the past three years in which data is available for each qualification, completion rates for each qualification, and the number of RTOs delivering these qualifications.

Job role	Qualification to be updated to support the job role	Enrolment data (for the past three years)	Completion rates (for the past three years)	Number of RTOs delivering (for the past three years)
899914, Electrical or Telecommunications Trades Assistant	UEE10120Y Certificate I in ElectroComms Skills	140	23	2
899914, Electrical or Telecommunications Trades Assistant	UEE20520Y Certificate II in Computer Assembly and Repair	1283	398	5
899914, Electrical or Telecommunications Trades Assistant	UEE20720Y Certificate II in Data and Voice Communications	634	259	8
899914, Electrical or Telecommunications Trades Assistant	UEE20920Y Certificate II in Electronic Assembly	271	101	1
899914, Electrical or Telecommunications Trades Assistant	UEE21420Y Certificate II in Remote Area Power Supply Maintenance	0	0	1
899914, Electrical or Telecommunications Trades Assistant	UEE22120Y Certificate II in Sustainable Energy (Career Start)	43	38	6

342314, Electronic Instrument Trades Worker (General)	UEE30220Y Certificate III in Computer Systems Equipment	66	16	1
341111, Electrician (General)	UEE30620Y Certificate III in Electrical Machine Repair	138	17	4
341111, Electrician (General)	UEE30720Y Certificate III in Switchgear and Controlgear	12	0	1
341111, Electrician (General)	UEE30820Y Certificate III in Electrotechnology Electrician	101294	16394	8
340000, Electrotechnology and Telecommunications Trades Workers	UEE32020Y Certificate III in Renewable Energy – ELV	9	0	2
341111, Electrician (General)	UEE33020Y Certificate III in Electrical Fitting	1593	124	2
342314, Electronic Instrument Trades Worker (General)	UEE40120Y Certificate IV in Computer Systems	301	100	4
342411, Cabler (Data and Telecommunications)	UEE40220Y Certificate IV in Electrical - Data and Voice Communications	0	0	1
341111, Electrician (General)	UEE40320Y Certificate IV in Installation Inspection and Audits	0	0	1
341111, Electrician (General)	UEE40620Y Certificate IV in Electrotechnology - Systems Electrician	344	84	4
342315, Electronic Instrument Trades Worker (Special Class)	UEE41020Y Certificate IV in Energy Management and Control	29	0	1

342315, Electronic Instrument Trades Worker (Special Class)	UEE41220Y Certificate IV in Electrical – Rail Signalling	542	159	3
340000, Electrotechnology and Telecommunications Trades Workers	UEE41620Y Certificate IV in Renewable Energy	16	0	1
341112, Electrician (Special Class)	UEE41920Y Certificate IV in Electrical - Renewable Energy	0	0	1
341111, Electrician (General)	UEE42020Y Certificate IV in Electrical - Photovoltaic systems	913	137	1
341111, Electrician (General)	UEE42120Y Certificate IV in Electrotechnology - Electrical Contracting	29	3	1
341111, Electrician (General)	UEE42620Y Certificate IV in Hazardous areas - Electrical	2044	1262	8
341111, Electrician (General)	UEE43020Y Certificate IV in Electrical Equipment and Systems	57	45	1
341112, Electrician (Special Class)	UEE43120Y Certificate IV in Energy Efficiency and Assessment	0	0	1
313100, ICT Support Technicians	UEE50120Y Diploma of Computer Systems Engineering	155	33	1
341112, Electrician (Special Class)	UEE50420Y Diploma of Electrical Engineering	583	79	1
341112, Electrician (Special Class)	UEE50720Y Diploma of Renewable Energy Engineering	0	0	1
342111, Airconditioning and Refrigeration Mechanic	UEE51120Y Diploma of Engineering Technology - Refrigeration and Air Conditioning	87	14	1

341111, Electrician (General)	UEE53020Y Diploma of Electrical Systems Engineering	0	0	1
312312, Electrical Engineering Technician	UEE60920Y Advanced Diploma of Renewable Energy Engineering	19	0	1
312412, Electronic Engineering Technician	UEE61220Y Advanced Diploma of Engineering - Explosion protection	22	13	1
340000, Electrotechnology and Telecommunications Trades Workers	UEE62020Y Advanced Diploma of Engineering Technology - Renewable Energy	798	140	1
312312, Electrical Engineering Technician	UEE62120Y Advanced Diploma of Engineering Technology - Electrical	1818	454	9
312312, Electrical Engineering Technician	UEE62220Y Advanced Diploma of Electrical - Engineering	485	138	1
312312, Electrical Engineering Technician	UEE62320Y Advanced Diploma of Electrical Engineering - Coal Mining	71	0	1
342111, Airconditioning and Refrigeration Mechanic	UEE62420Y Advanced Diploma of Engineering Technology - Air Conditioning and Refrigeration	0	0	1
312312, Electrical Engineering Technician	UEE63020Y Advanced Diploma of Electrical Systems Engineering	0	0	1
	UEERE0001Y Apply environmentally and sustainable procedures in the energy sector	63340	46441	69
	UEERE0002Y Assemble and connect remote area power supplies	0	0	1
	UEERE0003Y Assess energy loads and uses for energy efficiency in commercial facilities	27	3	4

	UEERE0004Y Assess energy loads and uses for energy efficiency in industrial properties and enterprises	25	6	4
	UEERE0005Y Assess energy loads and uses for energy efficiency in residential, office and retail premises	29	7	4
	UEERE0006Y Conduct periodic maintenance of remote area power supply battery banks	0	0	2
	UEERE0007Y Conduct periodic maintenance of remote area power supply generator sets	0	0	2
	UEERE0008Y Conduct periodic maintenance of remote area power supply photovoltaic arrays	0	0	2
	UEERE0009Y Conduct periodic maintenance of remote area power supply wind generators	0	0	2
	UEERE0010Y Design energy management controls for electrical installations in buildings	397	217	10
	UEERE0011Y Design grid-connected photovoltaic power supply systems	5615	4723	33
	UEERE0012Y Develop effective engineering strategies for energy reduction in buildings	503	241	11
	UEERE0013Y Develop strategies to address environmental and sustainability issues in the energy sector	2219	1324	17
	UEERE0014Y Develop strategies to address sustainability issues for electrical installations	29	14	4

	UEERE0015Y Implement and monitor energy sector environmental and sustainable policies and procedures	5489	3961	32
	UEERE0016Y Install, configure and commission LV grid-connected photovoltaic power systems	5369	4687	26
	UEERE0017Y Maintain and repair facilities associated with remote area essential service operations	0	0	3
	UEERE0018Y Maintain and repair remote area power generation facilities	1	1	2
	UEERE0019Y Maintain safety and tidiness of remote area power supply systems	36	36	12
	UEERE0020Y Promote sustainable energy practices in the community	53	58	8
	UEERE0021Y Provide basic sustainable energy solutions for energy reduction in residential premises	3399	2922	11
	UEERE0022Y Solve basic problems in photovoltaic energy apparatus and systems	6695	5560	34
	UEERE0023Y Work safely with remote area power supply systems	27	27	12
	UEERE0024Y Attend to breakdowns in remote area power supplies (RAPS)	0	0	3
	UEERE0025Y Carry out basic repairs to renewable energy (RE) apparatus	967	582	12
	UEERE0026Y Conduct checks in the demand side use of remote area power supplies (RAPS)	0	0	3

	UEERE0027Y Coordinate maintenance of renewable energy (RE) apparatus and systems	0	0	2
	UEERE0028Y Design hybrid renewable power systems	388	221	10
	UEERE0029Y Design micro-hydro systems rated to 6.4 kW	385	221	10
	UEERE0030Y Design renewable energy (RE) heating systems	226	113	10
	UEERE0031Y Design stand-alone renewable energy (RE) systems	874	635	18
	UEERE0032Y Design wind energy conversion systems (WECS) rated to 10 kW	173	98	11
	UEERE0033Y Develop engineering solutions to renewable energy (RE) problems	393	215	10
	UEERE0034Y Diagnose and rectify faults in renewable energy (RE) control systems	436	248	5
	UEERE0035Y Install ELV stand-alone photovoltaic power systems	852	631	12
	UEERE0036Y Install small wind energy conversion systems rated up to 10 kW for ELV standalone applications	0	0	4
	UEERE0037Y Install, configure and commission LV micro-hydro systems rated up to 6.4 kW	0	0	1
	UEERE0038Y Install, configure and commission LV wind energy conversion systems rated up to 10 kW	0	0	1

	UEERE0039Y Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW	392	219	3
	UEERE0040Y Maintain and monitor remote area essential service operations	0	0	1
	UEERE0041Y Maintain operation of remote area power generation plant	0	0	3
	UEERE0042Y Manage renewable energy (RE) projects	390	223	1
	UEERE0043Y Plan periodic maintenance schedules of remote area power supplies (RAPS)	0	0	3
	UEERE0044Y Plan renewable energy (RE) projects	393	217	1
	UEERE0045Y Solve basic problems in micro-hydro systems	405	218	3
	UEERE0046Y Solve problems in stand-alone renewable energy (RE) systems	868	642	12
	UEERE0047Y Solve problems in wind energy conversion systems (WECS) rated up to 10 kW	386	218	4
	UEERE0048Y Verify compliance and functionality of an extra-low voltage renewable energy installation	0	0	3



## **Attachment C: List of stakeholders that actively participated in the consultation process of the Case for Change**

Active participation has included stakeholders from the following organisations across all states and territories within Australia:

- Industry Reference Committee (IRC) Representatives
- Technical Advisory Committees
- Employers (Non-IRC)
- Peak Industry Bodies
- Unions
- Regulators
- RTOs
- Other/Consultants

### Attachment D: Issues Raised by Stakeholders during consultation on the development of the Case for Change

Stakeholder Type	Issues Raised	IRC's Response to Issues Raised
Industry Reference Committee (IRC) Representatives	NIL	NA
Peak Industry Bodies	NIL	NA
Employers (Non-IRC)	NIL	NA
Regulators	NIL	NA
Registered Training Organisations (RTOs)	NIL	NA
Training Boards/Other	NIL	NA
State and Territory Training Authorities (STAs)	NIL	NA
Unions	NIL	NA
<i>Please add other categories as appropriate</i>	NIL	NA

## **Attachment E: List of stakeholders to be contacted as part of the development of the Case for Endorsement**

The Case for Endorsement development will involve contacting stakeholders from the following types of organisations across all states and territories within Australia:

- Industry Reference Committee (IRC) Representatives
- Employers (Non-IRC)
- Peak Industry Bodies
- Unions
- Regulators
- RTOs
- Other/Consultants