



Australian
Industry and
Skills Committee

UEE ELECTRONICS AND COMMUNICATIONS

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that all qualifications related to Electronics and Communications were no longer fit for purpose because they reference outdated technology no longer used by industry. The review will update these qualifications and related units and Skill Sets to reflect current technologies, industry requirements and work practices.

Most of this content was last updated over 10 years ago. Electronics and communications systems have evolved significantly since with a significant number of ICT Training Package units being updated/developed which should be considered for use as imported units in these qualifications.

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

Now more than ever it is important the IRC works closely with stakeholders to ensure qualifications remain contemporary and meet the requirements of employers whilst providing flexibility for workforce participants. The currency of content around electronics and communications has never been more important.

2.2 Evidence for change

The sector is currently experiencing a double disruption, with the COVID-19 pandemic causing unprecedented changes in every element of work and dramatically accelerating the pace of digital transformation that was already well underway. As a primary driver of productivity and as a prerequisite to meeting constant changes to consumer behaviour, Digital Transformation will be central to the recovery of the Australian economy.

Reports indicate that the pandemic has expedited the utilisation of electronic and communication systems which form the backbone of automated systems and smart devices.

Many qualifications within the UEE Training Package have not been updated for at least ten years, with some content not looked at in any meaningful way since the 1990s. Electronics and communications systems have evolved significantly during this time, with digital communication

being more broadly embraced as a means of doing business, particularly during the Covid pandemic, creating employment opportunities for technicians.

2.3 Consideration of existing products

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

Units from the ICT Information and Communications Technology Training Package will be considered for use as imports to cover contemporary Information Technology practices. Units from the BSB Business Services Training Package will be considered for use as imports to cover contemporary project management practices. These imports may be used to replace existing UEE Units of competency if the Technical Advisory Committee (TAC) considers it appropriate.

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

As mentioned in section 2.3, a focus of the project will be to consider where imported units from other industry training packages can be used to meet skilling needs and/or replace current UEE units where appropriate.

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 this qualification 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. A broad question about the approach that will be used for the review was posed in the Q & A section of the webinar indicating stakeholder interest in the work. 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

Some units may provide the basis for 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

Signature of Chair

Date

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
5	Electronics and Communications	Qualification	UEE21920Y	Certificate II in Electronics	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	UEE30920Y	Certificate III in Electronics and Communications	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	UEE40720Y	Certificate IV in Electronics and Communications	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	UEE50520Y	Diploma of Electronics and Communications Engineering	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	UEE60220Y	Advanced Diploma of Electronics and Communications Engineering	05/Oct/2020 - Transition	Update
5	<i>Electronics and Communications</i>	<i>Qualification</i>	<i>*UEE30120Y</i>	<i>Certificate III in Business 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
5	Electronics and Communications	Qualification	*UEE30320Y	Certificate III in Custom Electronics Installations	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE30420Y	Certificate III in Data and Voice Communications	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE31420Y	Certificate III in Security Equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE41520Y	Certificate IV in Video and Audio Systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE41720Y	Certificate IV in Rail - Communications and Network Systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE61720Y	Advanced Diploma of Engineering Technology - Electronics	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE61820Y	Advanced Diploma of Engineering Technology - Computer Systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE31020Y	Certificate III in Fire Protection Control	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE60420Y	Advanced Diploma of Computer Systems 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
5	Electronics and Communications	Qualification	*UEE21020Y	Certificate II in Fire Alarms Servicing	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE40820Y	Certificate IV in Electrical - Fire Protection Control Systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE21620Y	Certificate II in Security Assembly and Set-up	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Qualification	*UEE21220Y	Certificate II in Antennae Equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0001Y	Analyse the performance of wireless-based electronic communication systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0002Y	Assemble and install reception antennae and signal distribution equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0003Y	Assemble and set up basic security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0004Y	Assemble and set up fixed video/audio components and systems in buildings and premises	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0005Y	Assess electronic apparatus compliance	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
5	Electronics and Communications	Unit	UEEEEC0006Y	Carry out repairs of predictable faults in video and audio replay/recording apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0007Y	Commission electronics and communications systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0008Y	Commission large fire protection systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0009Y	Commission satellite and microwave communication systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0010Y	Design and develop advanced digital systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0011Y	Design and develop electronics/computer systems projects	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0012Y	Design custom electronic equipment installations	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0013Y	Design electronic printed circuit boards	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0014Y	Design signal-conditioning sub-systems	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
5	Electronics and Communications	Unit	UEEEEC0015Y	Develop basic plans for integrating security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0016Y	Develop engineering solutions to RF amplifier problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0017Y	Develop engineering solutions to analogue electronic problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0018Y	Develop engineering solutions to audio electronic problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0019Y	Develop software solutions for microcontroller-based systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0020Y	Develop solutions for air surveillance apparatus and systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0021Y	Diagnose and rectify faults in air navigation circuits and systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0022Y	Diagnose and rectify faults in camera circuits and equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0023Y	Diagnose and rectify faults in digital transmission circuits and systems	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
5	Electronics and Communications	Unit	UEEEEC0024Y	Diagnose and rectify faults in electronic display circuits	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0025Y	Diagnose and rectify faults in recording and replay equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0026Y	Enter and verify programs for fire protection systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0027Y	Enter instructions and test wired and wireless security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0028Y	Fault find and repair complex power supplies	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0029Y	Fault find and repair electronic apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0030Y	Fault find and repair electronic medical equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0031Y	Fault find and repair global positioning systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0032Y	Fault find and repair high-volume office equipment	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
5	Electronics and Communications	Unit	UEEEEC0033Y	Fault find and repair navigation systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0034Y	Fault find and repair radar apparatus and systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0035Y	Fault find and repair satellite-based surveillance and observation systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0036Y	Fault find and repair sonar apparatus and systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0037Y	Fault find and repair telecommunication apparatus and systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0038Y	Find and repair microwave amplifier section faults in electronic apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0039Y	Install and test microwave antennae and waveguides	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0040Y	Install commercial video/audio system components	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0041Y	Install fire detection and warning system apparatus	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
5	Electronics and Communications	Unit	UEEEEC0042Y	Install large security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0043Y	Manage computer systems/electronics projects	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0044Y	Modify - redesign electronics and communications systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0045Y	Modify digital signal processing (DSP) based sub-systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0046Y	Operate and maintain amateur radio communication stations	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0047Y	Plan large electronic projects	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0048Y	Program and commission commercial access control security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0049Y	Program and commission commercial security closed-circuit television systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0050Y	Program and commission commercial security systems	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
5	Electronics and Communications	Unit	UEEEEC0051Y	Program and commission commercial video/audio systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0052Y	Program and test large security systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0053Y	Provide engineering solutions to air traffic control system problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0054Y	Provide gate array solutions for complex electronics systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0055Y	Repair basic computer equipment faults by replacement of modules/subassemblies	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0056Y	Repair predictable faults in audio components	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0057Y	Repair predictable faults in general electronic apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0058Y	Repair predictable faults in television receivers	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0059Y	Repair routine business equipment faults	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
5	Electronics and Communications	Unit	UEEEEC0060Y	Repairs basic electronic apparatus faults by replacement of components	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0061Y	Set up and adjust commercial radio frequency (RF) transmission and reception systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0062Y	Set up and test residential video/audio equipment	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0063Y	Solve fundamental electronic communications system problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0064Y	Solve oscillator problems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0065Y	Solve problems in basic electronic circuits	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0066Y	Troubleshoot amplifiers in an electronic apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0067Y	Troubleshoot basic amplifier circuits	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0068Y	Troubleshoot communication systems	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
5	Electronics and Communications	Unit	UEEEEC0069Y	Troubleshoot digital sub-systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0070Y	Troubleshoot faults in television receivers	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0071Y	Troubleshoot fire protection systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0072Y	Troubleshoot microcontroller-based hardware systems	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0073Y	Troubleshoot professional audio reproduction components	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0074Y	Troubleshoot resonance circuits in an electronic apparatus	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0075Y	Troubleshoot single phase input d.c power supplies	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0076Y	Verify compliance and functionality of fire protection system installations	05/Oct/2020 - Transition	Update
5	Electronics and Communications	Unit	UEEEEC0077Y	Verify functionality and compliance of custom electronic installations	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	UEE21920Y Certificate II in Electronics	1533	587	10
342313 Electronic Equipment Trades Worker	UEE30920Y Certificate III in Electronics and Communications	2261	447	15
342313 Electronic Equipment Trades Worker	UEE40720Y Certificate IV in Electronics and Communications	571	290	8
312412 Electronic Engineering Technician	UEE50520Y Diploma of Electronics and Communications Engineering	1127	496	9
312412 Electronic Engineering Technician	UEE60220Y Advanced Diploma of Electronics and Communications Engineering	669	140	7
342311 Business MachIne Mechanic	UEE30120Y Certificate III in Business Equipment	88	83	0
342314 Electronic Instrument Trades Worker (General)	UEE30320Y Certificate III in Custom Electronics Installations	0	0	0
342411 Cabler (Data And Telecommunications)	UEE30420Y Certificate III in Data and Voice Communications	1685	291	9
342313 Electronic Equipment Trades Worker	UEE31420Y Certificate III in Security Equipment	933	171	3

342314 Electronic Instrument Trades Worker (General)	UEE41520Y Certificate IV in Video and Audio Systems	21	3	1
342315 Electronic Instrument Trades Worker (Special Class)	UEE41720Y Certificate IV in Rail - Communications and Network Systems	0	6	1
312412 Electronic Engineering Technician	UEE61720Y Advanced Diploma of Engineering Technology – Electronics	18	2	1
313100 Ict Support Technicians	UEE61820Y Advanced Diploma of Engineering Technology - Computer Systems	5	0	0
341111 Electrician (General)	UEE31020Y Certificate III in Fire Protection Control	118	30	4
263111 Computer Network And Systems Engineer	UEE60420Y Advanced Diploma of Computer Systems Engineering	596	168	5
899914 Electrical Or Telecommunications Trades Assistant	UEE21020Y Certificate II in Fire Alarms Servicing	0	0	0
342315 Electronic Instrument Trades Worker (Special Class)	UEE40820Y Certificate IV in Electrical - Fire Protection Control Systems	0	0	0
899914 Electrical Or Telecommunications Trades Assistant	UEE21620Y Certificate II in Security Assembly and Set-up	131	45	2
899914 Electrical Or Telecommunications Trades Assistant	UEE21220Y Certificate II in Antennae Equipment	0	0	0
	UEEEEC0001Y Analyse the performance of wireless-based electronic communication systems	153	132	14
	UEEEEC0002Y Assemble and install reception antennae and signal distribution equipment	16	4	22

	UEEEEC0003Y Assemble and set up basic security systems	778	617	37
	UEEEEC0004Y Assemble and set up fixed video/audio components and systems in buildings and premises	2	2	20
	UEEEEC0005Y Assess electronic apparatus compliance	69	64	12
	UEEEEC0006Y Carry out repairs of predictable faults in video and audio replay/recording apparatus	0	0	20
	UEEEEC0007Y Commission electronics and communications systems	800	696	12
	UEEEEC0008Y Commission large fire protection systems	47	44	24
	UEEEEC0009Y Commission satellite and microwave communication systems	53	49	14
	UEEEEC0010Y Design and develop advanced digital systems	454	393	14
	UEEEEC0011Y Design and develop electronics/computer systems projects	523	391	17
	UEEEEC0012Y Design custom electronic equipment installations	0	0	14
	UEEEEC0013Y Design electronic printed circuit boards	734	588	14
	UEEEEC0014Y Design signal-conditioning sub-systems	168	134	15
	UEEEEC0015Y Develop basic plans for integrating security systems	0	0	16
	UEEEEC0016Y Develop engineering solutions to RF amplifier problems	106	92	12

	UEEEEC0017Y Develop engineering solutions to analogue electronic problems	742	604	14
	UEEEEC0018Y Develop engineering solutions to audio electronic problems	0	0	12
	UEEEEC0019Y Develop software solutions for microcontroller-based systems	790	629	22
	UEEEEC0020Y Develop solutions for air surveillance apparatus and systems	0	0	12
	UEEEEC0021Y Diagnose and rectify faults in air navigation circuits and systems	15	15	12
	UEEEEC0022Y Diagnose and rectify faults in camera circuits and equipment	14	15	14
	UEEEEC0023Y Diagnose and rectify faults in digital transmission circuits and systems	1	1	14
	UEEEEC0024Y Diagnose and rectify faults in electronic display circuits	37	32	14
	UEEEEC0025Y Diagnose and rectify faults in recording and replay equipment	0	0	14
	UEEEEC0026Y Enter and verify programs for fire protection systems	57	43	24
	UEEEEC0027Y Enter instructions and test wired and wireless security systems	371	308	23
	UEEEEC0028Y Fault find and repair complex power supplies	1007	810	20
	UEEEEC0029Y Fault find and repair electronic apparatus	383	307	21

	UEEEEC0030Y Fault find and repair electronic medical equipment	6	6	14
	UEEEEC0031Y Fault find and repair global positioning systems	18	18	14
	UEEEEC0032Y Fault find and repair high-volume office equipment	7	0	20
	UEEEEC0033Y Fault find and repair navigation systems	32	32	14
	UEEEEC0034Y Fault find and repair radar apparatus and systems	22	22	14
	UEEEEC0035Y Fault find and repair satellite-based surveillance and observation systems	20	17	14
	UEEEEC0036Y Fault find and repair sonar apparatus and systems	0	0	14
	UEEEEC0037Y Fault find and repair telecommunication apparatus and systems	25	25	14
	UEEEEC0038Y Find and repair microwave amplifier section faults in electronic apparatus	387	363	20
	UEEEEC0039Y Install and test microwave antennae and waveguides	15	3	22
	UEEEEC0040Y Install commercial video/audio system components	2	2	20
	UEEEEC0041Y Install fire detection and warning system apparatus	47	42	26
	UEEEEC0042Y Install large security systems	310	280	23

	UEEEEC0043Y Manage computer systems/electronics projects	371	324	10
	UEEEEC0044Y Modify - redesign electronics and communications systems	788	683	12
	UEEEEC0045Y Modify digital signal processing (DSP) based sub-systems	101	70	15
	UEEEEC0046Y Operate and maintain amateur radio communication stations	0	0	23
	UEEEEC0047Y Plan large electronic projects	111	97	7
	UEEEEC0048Y Program and commission commercial access control security systems	494	444	21
	UEEEEC0049Y Program and commission commercial security closed-circuit television systems	339	296	21
	UEEEEC0050Y Program and commission commercial security systems	321	275	21
	UEEEEC0051Y Program and commission commercial video/audio systems	4	4	14
	UEEEEC0052Y Program and test large security systems	130	108	15
	UEEEEC0053Y Provide engineering solutions to air traffic control system problems	15	15	12
	UEEEEC0054Y Provide gate array solutions for complex electronics systems	165	141	14
	UEEEEC0055Y Repair basic computer equipment faults by replacement of modules/subassemblies	91	61	28

	UEEEEC0056Y Repair predictable faults in audio components	7	7	20
	UEEEEC0057Y Repair predictable faults in general electronic apparatus	51	42	20
	UEEEEC0058Y Repair predictable faults in television receivers	14	11	20
	UEEEEC0059Y Repair routine business equipment faults	4	3	23
	UEEEEC0060Y Repairs basic electronic apparatus faults by replacement of components	12081	6007	61
	UEEEEC0061Y Set up and adjust commercial radio frequency (RF) transmission and reception systems	70	70	20
	UEEEEC0062Y Set up and test residential video/audio equipment	89	70	23
	UEEEEC0063Y Solve fundamental electronic communications system problems	1204	1000	20
	UEEEEC0064Y Solve oscillator problems	448	355	20
	UEEEEC0065Y Solve problems in basic electronic circuits	355	247	25
	UEEEEC0066Y Troubleshoot amplifiers in an electronic apparatus	1183	868	22
	UEEEEC0067Y Troubleshoot basic amplifier circuits	6361	2342	22
	UEEEEC0068Y Troubleshoot communication systems	725	651	20
	UEEEEC0069Y Troubleshoot digital sub-systems	6743	2596	36

	UEEEEC0070Y Troubleshoot faults in television receivers	0	0	20
	UEEEEC0071Y Troubleshoot fire protection systems	52	50	24
	UEEEEC0072Y Troubleshoot microcontroller-based hardware systems	540	443	22
	UEEEEC0073Y Troubleshoot professional audio reproduction components	0	0	20
	UEEEEC0074Y Troubleshoot resonance circuits in an electronic apparatus	2081	1558	32
	UEEEEC0075Y Troubleshoot single phase input d.c power supplies	2078	1589	51
	UEEEEC0076Y Verify compliance and functionality of fire protection system installations	54	53	24
	UEEEEC0077Y Verify functionality and compliance of custom electronic installations	1	0	20

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