



Australian
Industry and
Skills Committee



UEE RAIL SIGNALLING

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 Training Package

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 UEE41220 Certificate IV in Electrical - Rail Signalling and associated Units of Competency were no longer fit for purpose because they do not reflect current industry technologies and work practices.

There is currently a mismatch between the qualification outcomes and the skill and knowledge needs of employers. This mismatch has implications for the productivity and safety of workers.

In addition, the entry requirement added to the qualification as part of removing nested content during the transition is causing a barrier for some employers who deliver the qualification concurrently with the Certificate III Electrician qualification.

The entry requirement needs to urgently be reviewed to enable industry's preferred method of delivery.

2.2 Evidence for change

Rail projects are among the Government's prioritised infrastructure projects which include a substantial amount of electrical related work. Rail projects require electricians who are skilled in rail signalling. There is a reported shortage of signalling technicians.

The growing demand for electricians in different industries, especially for rail infrastructure projects, requires the workforce to be upskilled in installing and maintaining new technologies related to electrical components of rail signalling.

The qualification and units of competency were last updated over 10 years ago. Rail signalling technology has evolved significantly since that update. Some current units of competency reflect technology being phased out by the industry, and the systems which are now used are not adequately covered.

2.3 Consideration of existing products

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

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

The qualification and units proposed for review in this project cover specific technical skills and knowledge required by the rail signalling sector to work safely in compliance with industry requirements. Unfortunately streamlining or rationalisation of this content is not possible given the nature of the work functions covered.

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 of the qualification were raised during the consultation process. There is strong support for the review because the current qualification is not fit for purpose and its 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

This qualification is intended for qualified Electricians and as such the licencing and regulation implications for Electricians apply.

5. Project implementation

5.1 Prioritisation category

It is proposed that this review be progressed as a Fast-track project and will be published together with several other projects which industry needs fast-tracked.

The need to update out of date units and address barriers caused by the entry requirement need to be addressed urgently.

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 – July 2021
- Draft 1 consultation – August – September 2021

- Stakeholder validation – September – October 2021
- Quality Assurance – October – November 2021
- Final consultation with states and territories – November - December 2021
- CfE submitted for approval – 31 December 2021

5.3 Delivery or implementation issues

An important part of this project is to remove an entry barrier to the qualification being implemented in the way some employers need. The IRC has been approached by V-line who run the Certificate IV qualification concurrently with the Certificate III Electrician qualification after the first year of the latter. The new entry requirement of the Certificate III will extend the duration of apprenticeships considerably which will impact retention of apprentices and the supply of qualified trades people. This will need to be resolved whilst still ensuring rigor in how the Certificate III Electrician qualification is delivered.

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.

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

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
3	Rail Signalling	Qualification	UEE41220Y	Certificate IV in Electrical – Rail Signalling	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0001Y	Assemble and wire internal electrical rail signalling equipment	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0002Y	Decommission electrical and electromechanical rail signalling from service	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0003Y	Develop rail signalling system maintenance programs	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0004Y	Find and repair rail signalling system faults	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0005Y	Install and maintain active level crossing equipment	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0006Y	Install and maintain computer-based interlocking rail 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
3	Rail Signalling	Unit	UEERS0007Y	Install and maintain non-vital screen-based control systems	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0008Y	Install and maintain non-vital telemetry systems	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0009Y	Install and maintain power-operated point actuating devices	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0010Y	Install and maintain rail signalling power supplies	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0011Y	Install and maintain rail track circuit leads and bonds	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0012Y	Install and maintain trackside signal and train protection equipment	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0013Y	Install and maintain train detection equipment	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0014Y	Install and maintain vital relay interlocking systems	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0015Y	Maintain electronic and microprocessor-based remote control 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
3	Rail Signalling	Unit	UEERS0016Y	Maintain mechanical rail signalling equipment and infrastructure	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0017Y	Repair rail signalling power and control cables	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0018Y	Test and commission rail power equipment	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEERS0019Y	Test copper rail signalling cables	05/Oct/2020 - Transition	Update
3	Rail Signalling	Unit	UEECD0058Y	Observe safety practices are followed in the vicinity of isolated electrical cables	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)
342315 Electronic Instrument Trades Worker (Special Class)	UEE41220Y Certificate IV in Electrical – Rail Signalling	542	159	3
	UEERS0017Y Repair rail signalling power and control cables	316	184	14
	UEERS0011Y Install and maintain rail track circuit leads and bonds	325	178	14
	UEERS0001Y Assemble and wire internal electrical rail signalling equipment	321	182	14
	UEERS0019Y Test copper rail signalling cables	317	173	14
	UEERS0010Y Install and maintain rail signalling power supplies	264	147	3
	UEERS0007Y Install and maintain non-vital screen-based control systems	6	1	3
	UEERS0005Y Install and maintain active level crossing equipment	287	144	3
	UEERS0002Y Decommission electrical and electromechanical rail signalling from service	1	5	3
	UEERS0006Y Install and maintain computer-based interlocking rail systems	287	143	3

	UEERS0016Y Maintain mechanical rail signalling equipment and infrastructure	24	6	3
	UEERS0018Y Test and commission rail power equipment	6	1	3
	UEERS0009Y Install and maintain power-operated point actuating devices	269	136	3
	UEERS0003Y Develop rail signalling system maintenance programs	0	0	3
	UEERS0015Y Maintain electronic and microprocessor-based remote control systems	16	0	3
	UEERS0004Y Find and repair rail signalling system faults	279	139	3
	UEERS0014Y Install and maintain vital relay interlocking systems	274	133	3
	UEERS0008Y Install and maintain non-vital telemetry systems	440	147	3
	UEERS0013Y Install and maintain train detection equipment	270	138	3
	UEERS0012Y Install and maintain trackside signal and train protection equipment	287	144	3
	UEECD0058Y Observe safety practices are followed in the vicinity of isolated electrical cables	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