



Australian
Industry and
Skills Committee

UEP CONTROL ROOM OPERATIONS

Case for Change

Name of allocated IRC: ESI - Generation
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:	ESI - Generation
Name of SSO:	Australian Industry Standards

1.1 Name and code of Training Package examined to determine change is required

Electricity Supply Industry - Generation Sector 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

The transition to renewable energy has led to changes in the skills requirements of workers and a growing need for workforce mobility across the generation industry. The workforce needs to be upskilled and retrained in the operation and maintenance of existing and emerging renewable technologies and be able to adapt to new systems and processes. There is an opportunity for some sectors to transition workers from fossil fuels to renewables.

The predicted closures of coal fired plants nationally will present challenges in addressing skills gaps and reskilling individuals.

A new generation of energy operators working with new energy generation approaches will require a range of new skills that vary depending on the method of generation.

The IRC is proposing to develop four new Units of Competency and three Skill Sets to address skills requirements for control room operations relating to power generation in both fossil fuels and renewable energies, encompassing automated control systems.

Proposed units include: Operate and monitor hydro plant/systems; Co-ordinate grid operations control centre; Operate and monitor multi-control room site; Operate Renewable Wind, Solar and Hydro systems. New Skill Sets include: Managing site outages; Co-ordinate real-time offshore operations; and Managing network communications.

2.2 Evidence for change

The diversification of electricity generation is making Australia less reliant on coal to produce electricity. Ten of Australia's coal plants have already shut down and by 2030 about 55 per cent of the existing coal plants will be over 40 years old.

Australia has committed to reducing its CO2 emissions to 26-28% below 2005 levels by 2030. The Electricity sector accounts for 33% of Australia's total emission. Further integration of solar panels, battery storage, and wind generation technologies can play a significant role in reducing the industry's carbon footprint.

Energy Networks Australia and the CSIRO predict more than 40% of industrial customers will use renewable technologies by 2027, lifting to 60% in the next 30 years. With the expected retirement of several coal generation plants, green energy sources and methods will improve the efficiency of electricity generation.

The widespread implementation of digital and automatic systems has had a significant impact on the ESI Generation industry and its workforce. Upskilling the current and future workforce will be essential to meet new skill demands.

2.3 Consideration of existing products

The current PMA - Chemical, Hydrocarbons and Refining (Release 2.0) Training Package has Units of Competency relating to control systems in the chemical, hydrocarbons and refining industries. These units do not achieve the desired vocational outcome as they do not specify the skills and knowledge requirements for control room operators in ESI - Generation Industry working with renewable wind, solar and hydro systems.

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

This project will develop new Training Package products covering specific technical skills and knowledge required by control room operators in ESI - Generation Industry working with renewable wind, solar and hydro systems. 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 to address skills requirements for control room operations to align the content with contemporary industry practice was identified by AEMO (Australian Energy Market Operators), who are owned by government and industry to manage electricity and gas systems and markets across Australia.

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 on the Engagement Hub of the AIS website and feedback invited.

Notification of the opportunity to provide feedback through the ESI TDR webinar, or in writing through the Engagement Hub, was provided to over 640 ESI TDR sector stakeholder subscribers including industry representatives from across the states/territories in rural, regional and remote areas.

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 develop the new Units of Competency and Skill Sets were raised during the consultation process. There is strong support of the need of up-to-date products for the ESI-Generation industry. The project work was outlined during a webinar conducted for the ESI-GEN industry on 25 March 2021 which had 26 participants. No questions about the work were posed in the Q & A section of the webinar. 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 ESI GEN IRC.

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

AIS, on behalf of the ESI GEN 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
- Industry forums and conferences
- Webinars
- Online feedback mechanisms
- STA direct engagement

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 requirements for the development of new units and skill sets

5. Project implementation

5.1 Prioritisation category

It is proposed that this product development is progressed as a routine project.

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 – November - December 2021
- Quality Assurance – February - March 2022
- Final consultation with states and territories – April - May 2022
- CfE submitted for approval – 30 June 2022

5.3 Delivery or implementation issues

No issues to delivery or implementation have been raised by stakeholders. This new project has support from RTOs to meet the requirements of industry of current workplace practice.

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

Training delivery information will be provided within the supporting Companion Volume Implementation Guide. These new training package products will support the role of control operators in the ESI – Generation Industry. The proposed new products will be suitable for use by multiple energy industry sectors and will provide improved opportunities for individual operators in any sector to transfer acquired skills and knowledge into renewable generation and/or operating environments. This Case for Change proposes new training products to allow individuals to develop cross skilling of Control Room Operator skills and knowledge in the energy sector.

This Case for Change was agreed to by the ESI Generation IRC

Name of Chair

Tony Saxby

Signature of Chair



Date

21 May 2021

Attachment A: Training Package components to change

Australian Industry Standards Limited

Contact details: David Dixon - Chief Operating Officer

Date submitted: 8 June 2021

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
1	Control Centre Operations	Qualification	UEP30118Y	Certificate III in ESI Generation - Systems Operations	31/Oct/2018 - Transition	Update
1	Control Centre Operations	Unit	UEPOPS999Y	Operate and monitor hydro plant/systems	NA	New
1	Control Centre Operations	Unit	UEPOPS998Y	Co-ordinate grid operations control centre	NA	New
1	Control Centre Operations	Unit	UEPOPS997Y	Operate and monitor multi-control room site	NA	New
1	Control Centre Operations	Unit	UEPOPS996Y	Operate Renewable Wind, Solar and Hydro systems	NA	New
1	Control Centre Operations	Skill Set	UEPSS99999Y	Managing Site Outages Skill Set	NA	New

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
1	Control Centre Operations	Skill Set	UEPSS99998 Y	Co-ordinate Real-Time Offshore Operations Skill Set	NA	New
1	Control Centre Operations	Skill Set	UEPSS99997 Y	Managing Network Communications Skill Set	NA	New

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)
	UEPOPS999Y Operate and monitor hydro plant/systems	NA	NA	
	UEPOPS998Y Co-ordinate grid operations control centre	NA	NA	
	UEPOPS997Y Operate and monitor multi-control room site	NA	NA	
	UEPOPS996Y Operate Renewable Wind, Solar and Hydro systems	NA	NA	
3992, Chemical, Gas, Petroleum and Power Generation Plant Operators	UEPSS99999Y Managing Site Outages Skill Set	NA	NA	
3992, Chemical, Gas, Petroleum and Power	UEPSS99998Y Co-ordinate Real-Time Offshore Operations Skill Set	NA	NA	

Generation Plant Operators				
3992, Chemical, Gas, Petroleum and Power Generation Plant Operators	UEPSS99997Y Managing Network Communications Skill Set	NA	NA	
3992, Chemical, Gas, Petroleum and Power Generation Plant Operators	UEP30118Y Certificate III in ESI Generation - Systems Operations	34	0	1

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

Name of stakeholder	Title	Organisation	Organisation type (e.g. Employer, peak body, union, RTO, regulator)	Jurisdiction/town/city (e.g. NSW/Sydney)
Adam Riley	Teacher	TAFE	RTO	NSW
Adrian Parker	Contractor	Fortitude Live Work	Other	NSW
Angelo Mifsud	BDM	RANS	Employer	VIC
Craig Turner	Teacher	TAFENSW	RTO	NSW
David Morgan	CEO	Artibus Innovation	Other	TAS
Elizabet Joannou	Training Programmes Manager	Global Sustainable Energy Solutions	RTO	NSW
Gary Lucas	Technical Lead	AURECON	RTO	NT VIC
Grant Morehouse	Technical Advisor	NECA	Other	NSW
IAN EGGLETON	Teacher	TAFE	Employer	NSW
JAYNE HASSETT	HR Officer (Training & Development)	LYB OPERATIONS & MAINTENANCE PTY LTD	Employer	VIC
Karen Ruppert	RTO Manager	Catholic Education Archdiocese Canberra Goulburn	RTO	ACT NSW
Karen Roberts	Industry Engagement Manager	DESBT	Other	QLD

Katie Tunnah	Apprenticeship Program Coordinator	APA Group	Employer	ACT NSW NT QLD SA VIC WA
Lei De Guy	Renewables Manager	RANS Electrical	Employer	VIC
Luke O'Sullivan	Director	Livewire Training and Consultancy	RTO	NSW
Lynda Green	Training Package Content officer	AATIS	Other	VIC
Marie Previte	Skills and Training	Edmund Rice Education Australia - Office	RTO	QLD
Mark Burgess	National Apprenticeship Officer	ETU	Union	VIC
Michael Fletcher	Senior Policy Officer	Department of Education	Regulator	NSW
Neil Roberts	State Inspector - Engineering	Safework NSW	Regulator	NSW
Nicholas Bryant	Team Leader Northern Region - Electrotechnology	TAFE NSW	RTO	NSW
Ryan Flack	Project Engineer	Global Sustainable Energy Solutions	RTO	NSW
Scott Bell	Trainer assessor	TAFE NSW, Enersafe, Aurecon, Maxwell Recruitment & Training.	RTO	ACT NSW NT QLD SA TAS VIC
Steve Bryant	Project Specialist	Box Hill Institute	RTO	VIC
Tara Koot	Apprentice organiser	ETU	Union	ACT NSW

Tim Buckley	Operations & Maintenance Training Coordinator	Alinta Energy Loy Yang B	Employer	VIC
Tony Saxby	Technical Training Coordinator	Delta Electricity	Employer	NSW

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	There were no issues raised at this time	N/A
Peak Industry Bodies	There were no issues raised at this time	N/A
Employers (Non-IRC)	There were no issues raised at this time	N/A
Regulators	There were no issues raised at this time	N/A
Registered Training Organisations (RTOs)	There were no issues raised at this time	N/A
Training Boards/Other	There were no issues raised at this time	N/A
State and Territory Training Authorities (STAs)	There were no issues raised at this time	N/A
Unions	There were no issues raised at this time	N/A
<i>Please add other categories as appropriate</i>		

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

Name of stakeholder	Title	Organisation	Organisation type (e.g. Employer, peak body, union, RTO, regulator)	Jurisdiction/town/city (e.g. NSW/Sydney)
Adam Riley	Teacher	TAFE	RTO	NSW
Adrian Parker	Contractor	Fortitude Live Work	Other	NSW
Angelo Mifsud	BDM	RANS	Employer	VIC
Craig Turner	Teacher	TAFENSW	RTO	NSW
David Morgan	CEO	Artibus Innovation	Other	TAS
Elizabet Joannou	Training Programmes Manager	Global Sustainable Energy Solutions	RTO	NSW
Gary Lucas	Technical Lead	AURECON	RTO	NT VIC
Grant Morehouse	Technical Advisor	NECA	Other	NSW
IAN EGGLETON	Teacher	TAFE	Employer	NSW
JAYNE HASSETT	HR Officer (Training & Development)	LYB OPERATIONS & MAINTENANCE PTY LTD	Employer	VIC
Karen Ruppert	RTO Manager	Catholic Education Archdiocese Canberra Goulburn	RTO	ACT NSW
Karen Roberts	Industry Engagement Manager	DESBT	Other	QLD

Katie Tunnah	Apprenticeship Program Coordinator	APA Group	Employer	ACT NSW NT QLD SA VIC WA
Lei De Guy	Renewables Manager	RANS Electrical	Employer	VIC
Luke O'Sullivan	Director	Livewire Training and Consultancy	RTO	NSW
Lynda Green	Training Package Content officer	AATIS	Other	VIC
Marie Previte	Skills and Training	Edmund Rice Education Australia - Office	RTO	QLD
Mark Burgess	National Apprenticeship Officer	ETU	Union	VIC
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Neil Roberts	State Inspector - Engineering	Safework NSW	Regulator	NSW
Nicholas Bryant	Team Leader Northern Region - Electrotechnology	TAFE NSW	RTO	NSW
Ryan Flack	Project Engineer	Global Sustainable Energy Solutions	RTO	NSW
Scott Bell	Trainer assessor	TAFE NSW, Enersafe, Aurecon, Maxwell Recruitment & Training.	RTO	ACT NSW NT QLD SA TAS VIC
Steve Bryant	Project Specialist	Box Hill Institute	RTO	VIC
Tara Koot	Apprentice organiser	ETU	Union	ACT NSW

Tim Buckley	Operations & Maintenance Training Coordinator	Alinta Energy Loy Yang B	Employer	VIC
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