



Australian
Industry and
Skills Committee

UEP ELECTRICITY SUPPLY INDUSTRY - GENERATION SECTOR TRAINING PACKAGE RELEASE 2.0

Case for Endorsement

Name of allocated IRC: ESI GENERATION IRC
Name of the SSO: AUSTRALIAN INDUSTRY STANDARDS

1. Administrative details of the Case for Endorsement

Refer to **Attachment A** for the title and code for each of the training package components that are submitted for approval, and an indication of whether these are updated (including equivalence or non-equivalence status), new or deleted products

1.1 Case for Change details

The Case for Change was approved at the 21 June 2019 AISC meeting and directed by the Commonwealth through **Activity Order AIS/TPD/2018-19/002** dated 21 June 2019

Operations Personnel: Review: 7 Qualifications, 146 Units of Competency and 4 Skill Sets address changes in the generation industry, including the move to renewable energy power generation.

Remote Area Essential Service: Review: 1 Qualification to include new power generation technology skills and provide clear vocational pathways to enhance employment opportunities for remote area communities.

Wind Power Generation: Review: 1 Qualification and 13 Units of Competency to address new technologies and work practices.

This Case for Endorsement (CfE) encompasses Training Package development activity proposed in the 2020 ESI Generation Industry Skills Forecast.

The updated Units of Competency were then incorporated into five qualifications within the ESI – Generation Training Package. These additional qualifications and units are identified in Appendix A by italics.

1.2 Timeframes and delays

These projects commenced on 28 August 2020 and submitted on 30 June 2021 in agreed timeframe.

2. Changes to training products and how these will meet the needs of industry

Refer to **Attachment B** for information on how the proposed updates to qualifications will better support job roles in industry.

Operations Personnel: The Electricity Generation industry is transitioning from a model of mostly coal fired steam turbine generation to a mix of thermal (coal), gas (natural, liquefied petroleum and hydrogen), renewable (solar), and large-scale wind generation and power storage. This has led to a change in skills needs and greater workforce mobility within the industry.

The updated Training Package materials address changes in the generation industry, including the move to renewable energy power generation, increasing automation of power generation control systems and data analytics.

Six existing qualifications have been amalgamated into a Certificate III, IV and Diploma in ESI Generation, with streams for Operations and System Operations. The changes will enable greater workforce mobility across the generation industry.

The following six Qualifications:

- Certificate III in ESI Generation – Systems Operations
- Certificate III in ESI Generation – Operations
- Certificate IV in ESI Generation – Systems Operations
- Certificate IV in ESI Generation – Operations
- Diploma of ESI Generation – Systems Operations
- Diploma of ESI Generation – Operations

were streamed to three Qualifications:

- Certificate III in ESI Generation
- Certificate IV in ESI Generation
- Diploma of ESI Generation.

Remote Area Essential Service: Changes in power generation technologies provides opportunities for remote area communities to increase support to ongoing power generation maintenance and repair, emergency technical response (generation plant breakdowns), and the ongoing monitoring and reporting of remote power generation installations.

The Certificate II in Remote Area Essential Service qualification has been updated to include electives regarding the maintenance of energy generation equipment. This will enable vocational pathways and employment opportunities for remote area communities.

Wind Power Generation: Wind Power generation plants require different operational, management and system maintenance skills than held by the current workforce.

The Certificate IV in Large Scale Wind Generation qualification and associated Units of Competency have been reviewed and updated to align with new technologies and current work and safety practices. This will enable discrete site and technology specific training. The qualification also removed the electrical outcome, as this is no longer a requirement needed by wind turbine operators.

3. Stakeholder consultation strategy

Refer to **Attachment C** for:

- list of stakeholders that actively participated in consultation on the project
- summary feedback provided by stakeholder type and the IRCs response to this feedback
- summary of issues raised during stakeholder consultation and the IRCs response to these issues

3.1 Identification of stakeholders

At the start of each project, AIS opened expressions of interest for those wanting to participate in the projects via email update to general subscribers. AIS also approached enterprises, individual connections made at forums, seminars and through other various engagement activities. AIS also sought nominations from the ESI Generation Industry Reference Committee (IRC) who wished to participate in the Technical Advisory Committee (TAC) as subject matter experts.

Industry stakeholders from across all sectors of the ESI Generation industry covering most states and territories were represented in either the TAC or the IRC in relation to these projects.

3.2 Strategies for engaging stakeholders

Throughout the development, AIS used the following communication strategies to ensure relevant stakeholders were consulted:

- Phone, video/teleconference meetings and emails to key ESI Generation industry stakeholders
- IRC member communications to their relevant industry networks using various methods
- Establishment of a TAC from industry to validate the changes being made to the training products
- Emails to State and Territory Training Authorities (STAs) and VET regulators
- Email alerts on project progress to stakeholders providing project information (398 registered subscribers to the UEP Electricity Supply Industry - Generation Sector Training Package).
- Formal feedback was received from 13 stakeholders for the three projects. They are from enterprises, state government bodies, independent training consultants and STAs.

As part of the AIS communication strategy, key industry stakeholder views were sought, and all feedback presented to the TAC during initial drafting, redrafting and finalisation of products.

Stakeholder feedback was considered and discussed with TAC members and all decisions made at TAC meetings were documented. As part of the AIS communication strategy, all key industry stakeholders were regularly informed of the expected changes and impacts during the consultation periods.

TAC engagement activities started in September 2020 and finished in March 2021. Public consultation periods were:

Operations Personnel

- 26 November 2020 – 4 January 2021
- 8 February 2021 – 23 February 2021

Remote Area Essential Service

- 26 November 2020 – 4 January 2021
- 8 February 2021 – 23 February 2021

Wind Power Generation

- 18 November 2020 – 8 January 2021
- 8 February 2021 – 23 February 2021

3.3 Participation by different types of stakeholders

Industry stakeholders represented in the TACs for the projects were from regional areas across states, territories and jurisdictions, and represented a broad cross section of the generation industry including the Clean Energy Council, Electrical Trades Union and Energy Safe Victoria.

4. Evidence of industry support

4.1 Industry support

The ESI Generation IRC signed off on this Case for Endorsement on TBC.

Positive feedback from industry stakeholders was received during the Public Consultation Phases and during the ESI – Generation webinar in relation to each project. Industry reports are also indicated by letters of support and comments received throughout the public consultation and validation.

4.2 Engagement of States and Territories

All STAs were provided with all draft products and advised of the opportunity to provide feedback through the AIS website on the CfE over the period: 18 May 2021 – 1 June 2021. Relevant Industry Training Advisory Bodies (ITAB's) were consulted throughout the process.

Five STAs provided written support for the Case for Endorsement, and one has not provided written feedback.

4.3 Mitigation strategies

Key stakeholders are aware of the expected impacts of the change. During public consultation periods, additional information was provided regarding which Qualifications would contain the new Units of Competency. Training providers were consulted to provide their input around this discussion.

The five revised Qualifications are not equivalent to the ones they supersede. All the superseding Units of Competency are equivalent to the ones they supersede. Mapping attachments are included in this release to show what changes have been made to the reviewed Units of Competency.

Prior to this release of the UEP Electricity Supply Industry - Generation Sector Training Package, 31 Units of Competency and one Qualification have been deleted from the Training Package in accordance with AISC decision to remove zero enrolment training products.

4.4 Letters of industry support

Letters of support are provided as part of the submission

5. Dissenting views

5.1 Dissenting views/issues raised

The ETU has provided a dissenting view – “Certificate IV in Wind Power Generation. This is not acceptable to the ETU or our members that work on these turbines. These are highly skilled workers and providing direct entry through this qualification without the necessary underpinning skills and knowledge will lead to workplace accidents. The ETU are concerned with in the Certificate IV in Wind Power Generation. If an entry requirement of an electrician was put into the qual, then the majority of the attached concerns would go away. This is because workers utilising this course would already have the underpinning skills and knowledge to be able to perform safely and productively within the industry. The risks of providing a direct entry into this qualification far outweigh any benefits.”

The Victorian STA “continues to disagree with the determination of equivalence regarding UEP40321. While we note the qualification will be reviewed, the churn is of concern. The Victorian STA’s still supports for the progression of the CfE for UEP release 2 ESI to the AISC.”

5.2 Rationale for approval

The IRC carefully considered the dissenting view of the ETU and determined the qualification's packaged (core and elective UoC's including pre-requisites) do not require an unrestricted electrical licence. The request to include an entry requirement would cause a barrier to entry and restricted individuals for other industries to undertake the qualification.

The IRC identified the revised qualification did provide the necessary underpinning skills and knowledge for a Wind Turbine Operator.

The IRC does acknowledge that UoC's in the general electives may require an unrestricted electrical licence and have revised the Qualification Description to provide additional guidance 'When electrical units are selected, the student must have the appropriate regulatory licence to undertake these units.'

The IRC concluded the above action would address the dissenting view.

6. Reports by exception

No reports by exception received.

7. Mandatory Workplace Requirements

Refer to **Attachment D** for a list of the units of competency, the MWR, the rationale for this, and evidence of employer support for this requirement.

There are no mandatory workplace requirements in the Training package products developed in this CfE.

8. Implementation of the new training packages

8.1 Implementation issues

Potential implementation issues lie in setting up simulated environments for the learning process. It is considered that workplace or in-the-field environments would be the best scenario for learning, however, not all RTOs can accommodate this. Therefore, having a relationship with enterprises to allow access to networks for workplace learning is crucial. Setting up a simulated environment could be costly and not all RTOs can provide the required learning environment due to technological changes and requirements.

All the superseding Units of Competency in Release 2.0 projects are equivalent to the ones they supersede. The Qualifications included in this Case for Endorsement are recoded due to addition of Units of Competency and are not equivalent to the Qualifications they supersede due to streaming Qualifications and the revision and updating of core Units of Competency.

8.2 Potential for traineeship or apprenticeships

The Qualifications and the associated Units of Competency included in this CfE may be used as the basis for an apprenticeship. This is also dependant on factors such as funding agreements and availability in each state or territory.

8.3 Occupational and licensing requirements

There are no licensing requirements contained in the revised Qualifications, Skill Sets and Units of Competency.

8.4 Extension to transition period

Where the need for an extension to the transition period is identified for training products that are the subject of this Case for Endorsement, the SSO will apply to the relevant regulator for an extension to transition, to mitigate the identified impact on other training products, particular student cohorts or industry business needs

No extension to the transition period is requested.

9. Quality Assurance

The Case for Endorsement meets the following requirements:

Standards for Training Packages 2012	<input type="checkbox"/>
Training Package Products Policy	<input type="checkbox"/>
Training Package Development and Endorsement Process Policy	<input type="checkbox"/>
Companion Volume Implementation Guide is available and quality assured.	<input type="checkbox"/>

Copies of quality assurance reports are included in **Attachment F**.

10. Implementation of the Minister's priorities in training packages

Refer to **Attachment E** for information on no enrolment and low enrolment qualifications reviewed as part of this project, and the outcomes of this review (i.e. product proposed for deletion or retention). Attachment D also includes the rationale for retaining no and/or low enrolment products when this is the proposal.

Please include an explanation of how approval of the proposed training products will support the reform priorities for training packages agreed by skills ministers in November 2015 and October 2020:

Streamlining/rationalisation of training products	The streaming of the Qualifications allowed for flexibility for the ESI Generation workforce to transition from a model of mostly coal fired steam turbine generation to a mix of thermal (coal), gas (natural, liquefied petroleum and hydrogen), renewable (solar), and large-scale wind generation and power storage to address changes in the generation industry.
	An extensive search was conducted on training.gov.au of all other Training Packages to determine if any existing training products could be used. Based on a review of the existing ESI Generation components, the ESI Generation IRC recommends that the reviewed Qualifications, Units of Competency and Skill Sets be approved.

	<p>The proposed revised Qualifications are supported by existing training products and updates in the core and elective groups containing current technologies and workplace practices not previously met in the transitioned 2018 Release 1 UEP Electricity Supply Industry – Generation Sector Training Package have been included. This includes importing Units of Competency from the MEM, BSB, FBP and UEE Training Packages.</p>
	<p>The UEP Electricity Supply Industry – Generation Sector Training Package will have a net reduce of three Qualifications and 31 Units of Competency with zero enrolments deleted as per AISC decision.</p> <p>Total UEP Qualifications – eleven (11)</p> <p>Total UEP Units of Competency – two hundred and five (205)</p> <p>Total UEP Skill Sets – four (4)</p>
<p>Ensure that more information about industry’s expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed course choices</p>	<p>Throughout the revision and development of the Qualifications, Units of Competency and Skill Sets, industry’s expectation was to ensure flexible delivery was available to ensure that all industry sub-sectors were able to utilise the updated products. Included is an updated Companion Volume Implementation Guide for the new and existing UEP Electricity Supply Industry – Generation Sector Training Package.</p>
<p>Ensure the training system better supports individuals to move more easily between related occupations</p>	<p>The new streamed Qualifications are appropriate for generation operations personnel to further develop their skills and knowledge in the specialist areas enabling individuals to move between various sectors of this industry. The new Qualifications encourage flexible access from related industries of electrotechnology, fabrication and manufacturing to undertake training and recognise a potential learner’s current competencies.</p>
<p>Improve the efficiency of the training system by creating units that can be owned and used by multiple industry sectors</p> <p>Foster greater recognition of skill sets and work with industry to support their implementation</p>	<p>The four revised Skill Sets for high-risk licensing and high voltage (H.V.) operations were reviewed in consultation with subject matter experts and industry. These Skill Sets provide pathways to gain Qualifications and/or serve as add-ons to the Qualifications.</p>
<p>11. A link to the full content of the proposed training package component(s)</p>	
<p>The AISC should be provided with a link to the full, developed Training Package component(s) to be approved under the CfE.</p>	

A link to the Training Package components proposed for endorsement is included [here](#).

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

Name of Chair

Tony Saxby

Signature of Chair

Handwritten signature of Tony Saxby in black ink, with a small horizontal line underneath the name.

Date

30/06/2021

Attachment A: Training products submitted for approval

Please set out in the table below, the training products submitted for approval, including showing whether this is an updated, new or deleted product.

Training Product Name		Type	For existing products, equivalence/non-equivalence status	For updated products, rationale for equivalence/non-equivalence status
Qualifications				
UEP20121 Certificate II in ESI Generation - Operations Support		Updated	Equivalent	Superseded Units of Competency updated and general elective groups updated. Occupational outcome has not changed
UEP20221 Certificate II in Remote Area Essential Service		Updated	Non-Equivalent	New Units of Competency added to core and general elective groups updated and superseded Units of Competency updated. Occupational outcome updated to meet industry needs for remote area.
UEP30121 Certificate III in ESI Generation		Updated	Non-Equivalent	Stream two previous Certificate III Qualifications to increase flexibility of occupational outcome for industry.
UEP40121 Certificate IV in ESI Generation		Updated	Non-Equivalent	Stream two previous Certificate IV Qualifications to increase flexibility of occupational outcome for industry.
UEP40621 Certificate IV in Wind Power Generation		Updated	Non-Equivalent	Superseded Units of Competency updated and general elective groups updated. Occupational outcome changed as Electrical Fitter pathway not required for occupational outcome for industry.

UEP50121 Diploma of ESI Generation		Updated	Non- Equivalent	Stream two previous Diploma Qualifications to increase flexibility of occupational outcome for industry.
UEP40321 Certificate IV in ESI Generation Maintenance - Electrical Electronics		Updated	Equivalent	Updated superseded UEP units and superseded UEP prerequisite units
UEP40421 Certificate IV in ESI Generation Maintenance (Fabrication)		Updated	Equivalent	Updated superseded UEP units and superseded UEP prerequisite units
UEP40521 Certificate IV in ESI Generation Maintenance (Mechanical)		Updated	Equivalent	Updated superseded UEP units and superseded UEP prerequisite units
UEP50321 Diploma of ESI Generation (Maintenance)		Updated	Equivalent	Updated superseded UEP units and superseded UEP prerequisite units
UEP50421 Diploma of ESI Generation Maintenance - Electrical Electronic		Updated	Equivalent	Updated superseded UEP units and superseded UEP prerequisite units
Units of competency				
UEPMNT001 Carry out routine work activities in an electricity supply industry generation environment		Updated	Equivalent	Occupational outcome has not changed
UEPMNT002 Carry out routine work activities in an ESI large scale wind generation environment		Updated	Equivalent	Occupational outcome has not changed
UEPMNT003 Coordinate maintenance on a wind farm		Updated	Equivalent	Occupational outcome has not changed
UEPMNT004 Diagnose and repair faults in large scale wind turbines		Updated	Equivalent	Occupational outcome has not changed

UEPMNT005 Diagnose and repair faults in wind turbine control systems		Updated	Equivalent	Occupational outcome has not changed
UEPMNT006 Diagnose and repair faults in wind turbine electrical systems		Updated	Equivalent	Occupational outcome has not changed
UEPMNT007 Diagnose and repair mechanical systems faults in wind turbines		Updated	Non- Equivalent	Occupational outcome has not changed
UEPMNT008 Maintain and monitor wind farm civil assets		Updated	Equivalent	Occupational outcome has not changed
UEPMNT009 Maintain large scale wind turbines		Updated	Equivalent	Occupational outcome has not changed
UEPMNT010 Maintain wind turbine control systems		Updated	Equivalent	Occupational outcome has not changed
UEPMNT011 Maintain wind turbine electrical systems		Updated	Equivalent	Occupational outcome has not changed
UEPMNT012 Maintain wind turbine mechanical systems		Updated	Equivalent	Occupational outcome has not changed
UEPMNT013 Monitor climatic conditions for renewable electricity generation		Updated	Equivalent	Occupational outcome has not changed
UEPMNT014 Test and commission wind turbines		Updated	Equivalent	Occupational outcome has not changed

UEPOPL003 Licence to operate a reciprocating steam engine		Updated	Equivalent	Occupational outcome has not changed
UEPOPL004 Licence to operate a steam turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS001 Analyse single protection device operation		Updated	Equivalent	Occupational outcome has not changed
UEPOPS002 Apply environmental and sustainable energy procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS003 Apply quality systems to work		Updated	Equivalent	Occupational outcome has not changed
UEPOPS004 Carry out operational checks on in-service electrical plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS005 Clean plant and equipment		Updated	Equivalent	Occupational outcome has not changed
UEPOPS006 Collect and analyse hydrological and meteorological data		Updated	Equivalent	Occupational outcome has not changed
UEPOPS007 Conduct chemical batching operations		Updated	Equivalent	Occupational outcome has not changed
UEPOPS009 Conduct minor electrical maintenance		Updated	Equivalent	Occupational outcome has not changed

UEPOPS010 Conduct minor mechanical maintenance		Updated	Equivalent	Occupational outcome has not changed
UEPOPS011 Conduct multiple energy source isolation procedures for permit to work		Updated	Equivalent	Occupational outcome has not changed
UEPOPS012 Conduct non-routine operational testing		Updated	Equivalent	Occupational outcome has not changed
UEPOPS013 Conduct operational checks and carry out corrective action on in-service electrical plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS014 Conduct operational checks on in-service mechanical plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS015 Conduct project management		Updated	Equivalent	Occupational outcome has not changed
UEPOPS016 Conduct routine wind turbine maintenance		Updated	Equivalent	Occupational outcome has not changed
UEPOPS017 Conduct single energy source isolation procedures for permit to work		Updated	Equivalent	Occupational outcome has not changed
UEPOPS018 Conduct water conveyance and control		Updated	Equivalent	Occupational outcome has not changed
UEPOPS019 Control electrical energy production		Updated	Equivalent	Occupational outcome has not changed

UEPOPS020 Control hydro generation pumping		Updated	Equivalent	Occupational outcome has not changed
UEPOPS021 Control permit to work operations		Updated	Equivalent	Occupational outcome has not changed
UEPOPS022 Coordinate and direct switching program		Updated	Equivalent	Occupational outcome has not changed
UEPOPS023 Coordinate electrical energy production		Updated	Equivalent	Occupational outcome has not changed
UEPOPS024 Coordinate first response team operation		Updated	Equivalent	Occupational outcome has not changed
UEPOPS025 Coordinate local H.V. networks		Updated	Equivalent	Occupational outcome has not changed
UEPOPS026 Coordinate network system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS027 Coordinate operational strategies for power production		Updated	Equivalent	Occupational outcome has not changed
UEPOPS028 Coordinate permit to work system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS029 Coordinate photovoltaic solar power plant operations		Updated	Equivalent	Occupational outcome has not changed

UEPOPS030 Coordinate power generation		Updated	Equivalent	Occupational outcome has not changed
UEPOPS031 Coordinate response to critical incidents		Updated	Equivalent	Occupational outcome has not changed
UEPOPS032 Coordinate team activities		Updated	Equivalent	Occupational outcome has not changed
UEPOPS033 Coordinate the use of contingency plans		Updated	Equivalent	Occupational outcome has not changed
UEPOPS034 Coordinate wind farm operations		Updated	Equivalent	Occupational outcome has not changed
UEPOPS035 Coordinate workplace communication		Updated	Equivalent	Occupational outcome has not changed
UEPOPS036 Develop H.V. switching programs		Updated	Equivalent	Occupational outcome has not changed
UEPOPS037 Ensure compliance with work health and safety policy and procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS038 Evaluate cost estimations and initiate appropriate solutions		Updated	Equivalent	Occupational outcome has not changed
UEPOPS039 Evaluate scheduling of generation plant		Updated	Equivalent	Occupational outcome has not changed

UEPOPS040 Facilitate the use of contingency plans for power generation facilities		Updated	Equivalent	Occupational outcome has not changed
UEPOPS041 Facilitate workplace communication		Updated	Equivalent	Occupational outcome has not changed
UEPOPS042 Implement dam safety surveillance procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS043 Interpret and analyse multi-operation protection devices		Updated	Equivalent	Occupational outcome has not changed
UEPOPS044 Liaise with stakeholders		Updated	Equivalent	Occupational outcome has not changed
UEPOPS045 Maintain and utilise records		Updated	Equivalent	Occupational outcome has not changed
UEPOPS046 Maintain battery banks and cells		Updated	Equivalent	Occupational outcome has not changed
UEPOPS047 Maintain quality systems within the team		Updated	Equivalent	Occupational outcome has not changed
UEPOPS048 Manage commissioning and decommissioning		Updated	Equivalent	Occupational outcome has not changed
UEPOPS049 Manage critical incidents		Updated	Equivalent	Occupational outcome has not changed

UEPOPS050 Manage environmental management systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS051 Manage first response team		Updated	Equivalent	Occupational outcome has not changed
UEPOPS052 Manage high voltage network system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS053 Manage operational crisis to maintain or restore power system integrity		Updated	Equivalent	Occupational outcome has not changed
UEPOPS054 Manage operational strategies for power production		Updated	Equivalent	Occupational outcome has not changed
UEPOPS055 Manage permit to work system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS056 Manage quality control procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS057 Manage system restart		Updated	Equivalent	Occupational outcome has not changed
UEPOPS058 Manage work health and safety policy and procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS059 Manage, operate and monitor a gas turbine unit		Updated	Equivalent	Occupational outcome has not changed

UEPOPS060 Monitor and coordinate the operation of a combined cycle gas turbine unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS061 Monitor and implement environmental site plans and procedures		Updated	Equivalent	Occupational outcome has not changed
UEPOPS062 Monitor and maintain civil assets		Updated	Equivalent	Occupational outcome has not changed
UEPOPS063 Monitor and maintain wind farm civil assets		Updated	Equivalent	Occupational outcome has not changed
UEPOPS064 Monitor climatic conditions for renewable energy production		Updated	Equivalent	Occupational outcome has not changed
UEPOPS065 Monitor implementation of quality control for production and maintenance		Updated	Equivalent	Occupational outcome has not changed
UEPOPS066 Monitor power generation plant reliability		Updated	Equivalent	Occupational outcome has not changed
UEPOPS067 Monitor the implementation of under frequency load shedding		Updated	Equivalent	Occupational outcome has not changed
UEPOPS068 Operate a hydro generator synchronous condenser pump unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS069 Operate air conditioning plant		Updated	Equivalent	Occupational outcome has not changed

UEPOPS070 Operate and monitor a boiler unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS071 Operate and monitor a heat recovery steam generator unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS072 Operate and monitor a hydro turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS073 Operate and monitor a steam turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS075 Operate and monitor a.c. electrical systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS076 Operate and monitor air conditioning plant and ventilation systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS077 Operate and monitor alkalinity reduction plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS078 Operate and monitor an internal combustion dual fuel reciprocating engine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS079 Operate and monitor an internal combustion single fuel reciprocating engine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS080 Operate and monitor ash and dust disposal plant		Updated	Equivalent	Occupational outcome has not changed

UEPOPS081 Operate and monitor auxiliary steam systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS082 Operate and monitor boiler draught system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS083 Operate and monitor boiler steam water cycle		Updated	Equivalent	Occupational outcome has not changed
UEPOPS084 Operate and monitor brine concentrator plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS085 Operate and monitor communications system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS086 Operate and monitor compressed air systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS087 Operate and monitor compressed gas systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS088 Operate and monitor condenser and auxiliary cooling systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS089 Operate and monitor d.c. electrical systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS090 Operate and monitor dual fuel firing plant		Updated	Equivalent	Occupational outcome has not changed

UEPOPS091 Operate and monitor dust collection plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS092 Operate and monitor fixed fire protection systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS093 Operate and monitor flue gas (NOx) mitigation systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS094 Operate and monitor fuel firing plant - coal		Updated	Equivalent	Occupational outcome has not changed
UEPOPS095 Operate and monitor fuel firing plant - gas/oil		Updated	Equivalent	Occupational outcome has not changed
UEPOPS096 Operate and monitor fuel supply		Updated	Equivalent	Occupational outcome has not changed
UEPOPS097 Operate and monitor fuel supply - coal		Updated	Equivalent	Occupational outcome has not changed
UEPOPS098 Operate and monitor gas production plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS099 Operate and monitor generator alternator		Updated	Equivalent	Occupational outcome has not changed
UEPOPS100 Operate and monitor heat exchangers and cooling systems		Updated	Equivalent	Occupational outcome has not changed

UEPOPS101 Operate and monitor HRSG hot gas control system		Updated	Equivalent	Occupational outcome has not changed
UEPOPS102 Operate and monitor hydro plant auxiliary systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS103 Operate and monitor hydro unit control and protection systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS104 Operate and monitor oil systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS105 Operate and monitor reverse osmosis plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS106 Operate and monitor site services water systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS107 Operate and monitor supervisory control and data acquisition systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS108 Operate and monitor system equipment		Updated	Equivalent	Occupational outcome has not changed
UEPOPS109 Operate and monitor water quality monitoring systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS110 Operate and monitor water systems condensate and feedwater		Updated	Equivalent	Occupational outcome has not changed

UEPOPS111 Operate and monitor water treatment plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS112 Operate bulk coal handling plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS113 Operate fabric filter dust collection plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS114 Operate H.V. condition changing apparatus		Updated	Equivalent	Occupational outcome has not changed
UEPOPS115 Operate hydroelectric generating plant and auxiliary equipment		Updated	Equivalent	Occupational outcome has not changed
UEPOPS116 Operate local H.V. switchgear		Updated	Equivalent	Occupational outcome has not changed
UEPOPS117 Operate local L.V. switchgear		Updated	Equivalent	Occupational outcome has not changed
UEPOPS118 Operate manual systems		Updated	Equivalent	Occupational outcome has not changed
UEPOPS119 Operate waste and contaminated water plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS120 Undertake operational commissioning and decommissioning		Updated	Equivalent	Occupational outcome has not changed

UEPOPS121 Perform plant lubrication		Updated	Equivalent	Occupational outcome has not changed
UEPOPS122 Perform process plant inspections		Updated	Equivalent	Occupational outcome has not changed
UEPOPS123 Perform risk analysis of generation plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS124 Perform switching to a switching program		Updated	Equivalent	Occupational outcome has not changed
UEPOPS125 Perform tool store duties		Updated	Equivalent	Occupational outcome has not changed
UEPOPS126 Plan a scheduled outage		Updated	Equivalent	Occupational outcome has not changed
UEPOPS127 Plan and organise work		Updated	Equivalent	Occupational outcome has not changed
UEPOPS128 Produce maintenance plans for generation production plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS129 Produce maintenance strategies for generation production plant		Updated	Equivalent	Occupational outcome has not changed
UEPOPS130 Respond to a critical incident		Updated	Equivalent	Occupational outcome has not changed

UEPOPS131 Run up a steam turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS132 Schedule generation		Updated	Equivalent	Occupational outcome has not changed
UEPOPS133 Shut down a boiler unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS134 Shut down a gas turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS135 Shut down a heat recovery steam generator unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS136 Shut down a hydro turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS137 Shut down a steam turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS138 Start and run up gas turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS139 Start and run-up a hydro turbine		Updated	Equivalent	Occupational outcome has not changed
UEPOPS140 Start up a boiler unit		Updated	Equivalent	Occupational outcome has not changed

UEPOPS141 Start up a heat recovery steam generator unit		Updated	Equivalent	Occupational outcome has not changed
UEPOPS142 Transport plant and equipment		Updated	Equivalent	Occupational outcome has not changed
UEPOPS143 Tune process plant and equipment		Updated	Equivalent	Occupational outcome has not changed
UEPOPS144 Undertake dam safety surveillance		Updated	Equivalent	Occupational outcome has not changed
UEPOPS145 Undertake local systems operations		Updated	Equivalent	Occupational outcome has not changed
UEPSS00009 High Risk Licensing - Licence to operate a reciprocating steam engine		Updated	Equivalent	Occupational outcome has not changed
UEPSS00010 High Risk Licensing - Licence to operate a steam turbine		Updated	Equivalent	Occupational outcome has not changed
UEPSS00011 High Voltage Operation - Development and coordination of H.V. switching programs		Updated	Equivalent	Occupational outcome has not changed
UEPSS00012 High Voltage Operation – H.V. switching programs		Updated	Equivalent	Occupational outcome has not changed

Training Package Quality Assurance

Attachment B: How qualification updates support job roles

Please use the table below to demonstrate how the proposed updates to qualifications will better support job roles

Job role	Qualification	Proposed updates and how these better support the job role
Operational Support Operative (Electricity Supply Industry)	Certificate II in ESI Generation - Operations Support	The updated revised Units of competency in this Qualification will support the job role by incorporating the new technologies and skills associated with them.
Power Plant Operator	Certificate II in ESI Generation - Operations Support	The updated to existing Units of competency in this Qualification will support the job role by incorporating the new technologies and skills associated with them.
Essential Utilities Worker	Certificate II in Remote Area Essential Service	The updated core and elective Units of competency in this Qualification will support the job role by ensuring the currency of the skills and knowledge needed to meet the workforce needs in remote areas.
Assistant Controller	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Systems Operator (Electricity Supply Industry)	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Boiler Attendant	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Electricity Generation/Turbine Operator	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Assistant Unit Controller	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Steam Generation/Boiler House Operator (Pulp and Paper)	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation

Training Package Quality Assurance

		workforce with wider job role outcomes for both operations and systems operations.
Power Generation Plant Operator	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Mechanical Operator Technician (Electricity Supply Industry)	Certificate III in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both operations and systems operations.
Electricity Generation/Turbine Senior Operator, Crew/Team Leader (Pulp and Paper)	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Power Distributor	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Systems Operation Technician (Electricity Supply Industry)	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Electricity Generation/Turbine Senior Operator, Crew/Team Leader (Pulp and Paper)	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Steam Generation/Boiler House Senior Operator, Crew/Team Leader (Pulp and Paper)	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Unit Controller	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Power Plant Technician	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation

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		workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Electricity Generation Worker (Operations)	Certificate IV in ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both team leaders and supervisors in operations and systems operations.
Electrician (Utilities Services Electrotechnology Renewable and Sustainable Energy)	Certificate IV in Large Scale Wind Generation	The revised Qualification reduces the barrier to entry by the removal of the electrical fitter pathway and focuses on the wind turbine operators.
Electrician	Certificate IV in Large Scale Wind Generation	The revised Qualification reduces the barrier to entry by the removal of the electrical fitter pathway and focuses on the wind turbine operators.
Utilities Services Electricity Industry Electricity Generation Maintenance	Certificate IV in Large Scale Wind Generation	The revised Qualification reduces the barrier to entry by the removal of the electrical fitter pathway and focuses on the wind turbine operators.
Senior Systems Operator (Electricity Supply Industry)	Diploma of ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both senior operators and technicians in operations and systems operations.
Operations Technical Officer (Electricity Supply Industry)	Diploma of ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both senior operators and technicians in operations and systems operations.
Unit Controller Supervisor	Diploma of ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both senior operators and technicians in operations and systems operations.
Senior Power Plant Operator	Diploma of ESI Generation	The streamed new Qualification will ensure greater access for individuals to undertake a training program and increase a more diverse generation workforce with wider job role outcomes for both senior operators and technicians in operations and systems operations.

Training Package Quality Assurance

Attachment C: Stakeholder consultation

List of stakeholders that actively participated in stakeholder consultation for the project:

Name	Organisation	Title	Industry	Representation Type	State
Dev Sharma	AGL	Electrical Asset Engineer			NSW
Gary Lucas	Aurecon Group	Senior ESI Consultant			
Igor Skofic	IAS Electrical	Electrical Engineer			NSW
Markus A Enkler, E.E.E.T.	Electrical Safety Volunteer Consultants	Energy Electronics Engineering Technician, RE, Electrical and I&C, Stat Auth			WA
Tim Buckley	Alinta Energy Loy Yang B Power Station	Training & Development Coordinator O&M			VIC
Nick Dekoning	Electrical Safety Volunteer Consultants	Tech SME Elec/Mech/Gas/Instro			WA
Gary Lucas	Aurecon / Lucas Electrical	Training Consultant - ESI			VIC
Markus A Enkler	Energy Electronics Engineering, Electrical Safety Volunteer Consultants	E.E.E.T.			WA
Neale Wardley	Optec	Skills Trainer			VIC
Glenn Platt	Unknown				NSW
David Hedger	Vestas				

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Name	Organisation	Title	Industry	Representation Type	State
Adam Mullins	Woolnorth wind farm				TAS
Richard Harvey	Thomson Bridge				
Brendan Ryan	TWPs				
Cameron Stowe	Waubra wind farm				
Nick DeKoning	Electrical Safety Volunteer Consultants	Tech SME Elec/Mech/Gas/Instro			

Summary of feedback by stakeholder type:

Stakeholder Type	Key Feedback Points	Actions Taken to Address Feedback
Industry Reference Committee (IRC) Representatives	<ul style="list-style-type: none"> Ensure alignment with industry work practices and products are fit for purpose ESI Generation 	<ul style="list-style-type: none"> Responded to and confirmed that the draft materials are fit for purpose and can be used to support workforce skills development
Peak Industry Bodies	<ul style="list-style-type: none"> Ensure future renewable generation requirements can be met by a developing workforce with evolving workforce needs 	
Employers (Non-IRC)	<ul style="list-style-type: none"> Specific elements are required around transferable skills for operations personnel to work 	<ul style="list-style-type: none"> Feedback discussed with the TAC, the TAC agreed to revise performance criteria and elements in Units of Competency and Qualifications

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Stakeholder Type	Key Feedback Points	Actions Taken to Address Feedback
	across generation sites	
	<ul style="list-style-type: none"> Revise knowledge and performance evidence to include manufacturers' recommendations and specifications to address the highly controlled environment of the workplace 	<ul style="list-style-type: none"> Feedback discussed with the TAC, the TAC revised in Units of Competency
Regulators	<ul style="list-style-type: none"> Address licencing requirements and outcomes in Qualifications 	<ul style="list-style-type: none"> Feedback discussed with the TAC, the TAC agreed to revise relevant Qualifications
Registered Training Organisations (RTOs)	<ul style="list-style-type: none"> Where possible, review the need to use prerequisites in existing and imported UoC 	<ul style="list-style-type: none"> Feedback discussed with the TAC, the TAC agreed to revise imported Units of Competency and package prerequisites in Qualifications.
Training Boards/Other	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
State and Territory Training Authorities (STAs)	<ul style="list-style-type: none"> Qualifications to package prerequisites units in Qualifications 	<ul style="list-style-type: none"> Query discussed with the TAC and the TAC agreed for the Operations Personnel Qualifications to package prerequisites new Units of Competency as recommended by STAs.
	<ul style="list-style-type: none"> The use of terms WHS and OHS may not be relevant to some states (Data Loggers) 	<ul style="list-style-type: none"> Feedback discussed with the TAC, there are some states/territories that operate under OHS and in the process of moving from OHS, therefore the terms WHS and OHS are kept in the Units of

Training Package Quality Assurance

Stakeholder Type	Key Feedback Points	Actions Taken to Address Feedback
		Competency to keep them generic
Unions	•	
Statutory bodies	•	
	•	

Training Package Quality Assurance

Summary of issues raised during stakeholder consultation

Issue raised	Key Feedback Points	Actions Taken to Address Feedback
New streamed Qualifications	<ul style="list-style-type: none"> New packaging rules of core and electives to be clear to implementation 	TAC discussed the feedback and felt that the packaging rules should be reworked and adjusted. This was actioned and updated by the TAC's approval.
Packaging prerequisites in the core units in Certificate II Generation – Operations Support	<ul style="list-style-type: none"> Prerequisite chains all required units can be selected within the packaging rules: CPCCCM2007 – has a prerequisite Unit of Competency (CPCCWHS2001). This prerequisite Unit of Competency is not included in the Qualification and will require 20 hours of unfunded training. Alternatively, this prerequisite could be included as an entry requirement?? 	TAC discussed the feedback and agreed to package prerequisite units in the core. This was actioned and updated by the TAC's approval.
Packaging prerequisites in the core units in Certificate IV Generation	<ul style="list-style-type: none"> UEPOPS130 Respond to a critical incident is identified and listed as a prerequisite for an operations core unit, but not included in the list of core or counted towards the total number of core Units of Competency required 	TAC discussed the feedback and agreed to package prerequisite Units of Competency in the core. This was actioned and updated by the TAC's approval.
Packaging prerequisites in the core units in Certificate IV Generation	<ul style="list-style-type: none"> In the Certificate IV the packaging rules states that there is 12 listed core Units of Competency, whereas, there is only 11 Units of Competency, with an 	TAC discussed the feedback and agreed to package prerequisite Units of Competency in the core and packaging rule revised. This was actioned and updated by the TAC's approval.

Training Package Quality Assurance

	<p>additional 2 prerequisite Units of Competency in the core, therefore making a total of 13.</p>	
<p>Packaging prerequisites in the core units in Diploma Generation</p>	<ul style="list-style-type: none"> • UEPOPS058 is listed as a core Unit of Competency with one prerequisite UEECD0025 Implement and monitor energy sector WHS policies and procedures. This Unit of Competency needs to be identified as a prerequisite, listed in the core and count towards the total core requirements for the Qualification. 	<p>TAC discussed the feedback and agreed to package prerequisite Units of Competency in the core. This was actioned and updated by the TAC's approval.</p>
<p>Packaging prerequisites of imported general elective units in Diploma Generation</p>	<ul style="list-style-type: none"> • Group A electives made up of imported Units of Competency with prerequisite units that are not identified or listed. For example: • MEM05004 Perform routine oxy fuel gas welding - has three prerequisite Units of Competency MEM05007 Perform manual heating and thermal cutting - has five prerequisite Units of Competency MEM05012 Perform routine manual metal arc welding - has three prerequisite Units of Competency All prerequisite Units of Competency need to be 	<p>TAC discussed the feedback and agreed to package prerequisite Units of Competency in the general electives. This was actioned and updated by the TAC's approval.</p>

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	<p>identified and listed in the qualification.</p>	
<p>Unit assessment conditions</p>	<ul style="list-style-type: none"> In unit UEPOPL003 I found some confusion relating to the Assessment Condition regarding simulation requirements 	<p>TAC discussed the feedback and agreed the to clarify the use of ‘simulators’ would not be acceptable to the unit outcome. This was actioned and updated by the TAC’s approval.</p>
<p>Unit application</p>	<ul style="list-style-type: none"> No licensing, legislative or certification requirements apply to this Unit of Competency at the time of publication. This statement is contradictory to the next paragraph which states you may require a licence or training permit to practice in the workplace 	<p>TAC discussed the feedback, and the statement refers to a licensing outcome and complies with the Training Package template. This was not actioned and agreed by the TAC.</p>
	<ul style="list-style-type: none"> Note: Workplace practice - remove, not required adds no value because the statement pertains to licence or permit to train 	<p>TAC discussed the feedback and agreed the removal of the statement from all Units of Competency because the revised Knowledge Evidence address workplace practice relating to industry codes of practice. This was actioned and updated by the TAC’s approval.</p>
<p>Certificate IV in Wind Power Generation</p>	<ul style="list-style-type: none"> The entry requirement for this qualification is via one of two pathways: A completed UEE30820 Certificate III in Electrotechnology Electrician or a current unrestricted electrical licence or 	<p>The IRC provided guidance and direction for the TAC to address the occupational outcome of the qualification. It was deemed by the IRC and TAC the unrestricted electrical licence and restricted electrical fitting licence work required to wind turbine work is not the intent of this Qualification and a licensed individual would undertake the work separately on the site. The UEE Units of Competency were removed from the core and elective list. This was actioned and updated by the TAC’s approval.</p>

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	<ul style="list-style-type: none"> • A completed UEE33020 Certificate III in Electrical Fitting (including superseded qualifications) or a current restricted electrical fitting licence. 	
<p>Certificate IV in Wind Power Generation unit packaging</p>	<ul style="list-style-type: none"> • The Unit of Competency UEPMNT005 Diagnose and repair faults in wind turbine control systems lists UEPOPS107 Operate and monitor supervisory control and data acquisition systems as a prerequisite Unit of Competency in the elective bank. However, UEPOPS107 itself is not listed as an elective making it impossible to choose UEPMNT005 as an elective. There may be other examples where this has occurred with the UEPOPS107 unit. 	<p>TAC discussed the feedback and agreed to package prerequisite Units of Competency in the general elective and other relevant units. This was actioned and updated by the TAC's approval.</p>
<p>Packaging prerequisites in the elective units in Cert II Remove Area Essential Service</p>	<ul style="list-style-type: none"> • Group A electives made up of imported Units of Competency with prerequisite Units of Competency that are not identified or listed. For example: <ul style="list-style-type: none"> • MEM05004 Perform routine oxy fuel gas welding - has three prerequisite Units of Competency • MEM05007 Perform manual heating and 	<p>TAC discussed the feedback and agreed to package prerequisite Units of Competency in the general elective. This was actioned and updated by the TAC's approval.</p>

Training Package Quality Assurance

	<p>thermal cutting - has five prerequisite Units of Competency MEM05012 Perform routine manual metal arc welding - has three prerequisite Units of Competency All prerequisite Units of Competency need to be identified and listed in the qualification.</p>	
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Training Package Quality Assurance

Attachment D: Mandatory Workplace Requirements in Training Products

Please set out in the table below training products which include a mandatory workplace requirement (i.e. which must be completed in a workplace)

Code/title	Description of the Requirement (e.g. work placement, assessment requirement)	Rationale for Inclusion	Evidence of employer support
N/A			

Training Package Quality Assurance

Attachment E: No enrolment and low enrolment training products

No Enrolment:

Please set out in the table below those training products that have had no enrolments over the past three years for which data is available

Units of Competency		
Name of Unit/Unit Code	Proposed for retention/deletion	Rationale for Retention
Nil		
Qualifications		
Name of Qualification/ Qualification Code	Proposed for retention/deletion	Rationale for Retention
Nil		

Low Enrolment:

Please set out in the table below those training products that have had low enrolments over the past three years for which data is available¹

Units of Competency		
Name of Unit/Unit Code	Proposed for retention/deletion	Rationale for Retention
Nil		
Qualifications		
Name of Qualification/ Qualification Code	Proposed for retention/deletion	Rationale for Retention
Nil		

Attachment F: Quality assurance reports

- Independent Quality Report
- Editorial and Equity Report

¹ Low enrolment training products are qualifications or units of competency that have had less than 42 enrolments in each of the past three years (*this is the maximum no. of enrolments for the bottom 25% of qualifications based on average enrolments over 2016 - 2018*)

Training Package Quality Assurance

Editorial Report Template

1. Cover page																							
Information required	Detail																						
Training Package title and code	UEP Electricity Supply Industry – Generation Sector Training Package (Release 2.0)																						
Number of new qualifications and their titles ¹	NA																						
Number of revised qualifications and their titles	<p>Eleven (11) Revised qualifications</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 20%;">UEP20121</td> <td>Certificate II in ESI Generation - Operations Support</td> </tr> <tr> <td>UEP20221</td> <td>Certificate II in Remote Area Essential Service</td> </tr> <tr> <td>UEP30121</td> <td>Certificate III in ESI Generation</td> </tr> <tr> <td>UEP40121</td> <td>Certificate IV in ESI Generation</td> </tr> <tr> <td>UEP40321</td> <td>Certificate IV in ESI Generation Maintenance - Electrical Electronics</td> </tr> <tr> <td>UEP40421</td> <td>Certificate IV in ESI Generation Maintenance (Fabrication)</td> </tr> <tr> <td>UEP40521</td> <td>Certificate IV in ESI Generation Maintenance (Mechanical)</td> </tr> <tr> <td>UEP40621</td> <td>Certificate IV in Wind Power Generation</td> </tr> <tr> <td>UEP50121</td> <td>Diploma of ESI Generation</td> </tr> <tr> <td>UEP50321</td> <td>Diploma of ESI Generation (Maintenance)</td> </tr> <tr> <td>UEP50421</td> <td>Diploma of ESI Generation Maintenance - Electrical Electronic</td> </tr> </tbody> </table>	UEP20121	Certificate II in ESI Generation - Operations Support	UEP20221	Certificate II in Remote Area Essential Service	UEP30121	Certificate III in ESI Generation	UEP40121	Certificate IV in ESI Generation	UEP40321	Certificate IV in ESI Generation Maintenance - Electrical Electronics	UEP40421	Certificate IV in ESI Generation Maintenance (Fabrication)	UEP40521	Certificate IV in ESI Generation Maintenance (Mechanical)	UEP40621	Certificate IV in Wind Power Generation	UEP50121	Diploma of ESI Generation	UEP50321	Diploma of ESI Generation (Maintenance)	UEP50421	Diploma of ESI Generation Maintenance - Electrical Electronic
UEP20121	Certificate II in ESI Generation - Operations Support																						
UEP20221	Certificate II in Remote Area Essential Service																						
UEP30121	Certificate III in ESI Generation																						
UEP40121	Certificate IV in ESI Generation																						
UEP40321	Certificate IV in ESI Generation Maintenance - Electrical Electronics																						
UEP40421	Certificate IV in ESI Generation Maintenance (Fabrication)																						
UEP40521	Certificate IV in ESI Generation Maintenance (Mechanical)																						
UEP40621	Certificate IV in Wind Power Generation																						
UEP50121	Diploma of ESI Generation																						
UEP50321	Diploma of ESI Generation (Maintenance)																						
UEP50421	Diploma of ESI Generation Maintenance - Electrical Electronic																						
Number of new units of competency and their titles	NA																						
Number of revised units of competency and their titles	<p>One hundred and sixty-one (161) revised units of competency.</p> <p>Refer to Attachment A</p>																						
Confirmation that the draft training package components are publication-ready	The draft Training Package components will be publication ready once uploaded onto training.gov.au																						

¹ When the number of training products is high the titles can be presented as an attachment.

Training Package Quality Assurance

Is the Editorial Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide a name.	Yes. Trish Gamper (Gamper Consulting Services)
Date of completion of the report	22 May 2021

Training Package Quality Assurance

2. Content and structure

Units of competency

Editorial requirements	Comments
Standard 5: <ul style="list-style-type: none"> The structure of units of competency complies with the unit of competency template. 	The structure of the units of competency complies with the unit of competency template and contains all necessary requirements.
Standard 7: <ul style="list-style-type: none"> The structure of assessment requirements complies with the assessment requirements template. 	The structure of the assessment requirements complies with the assessment requirements template. Performance and knowledge evidence contain adequate frequency and/or volume of evidence required, and the assessment conditions outline conditions for assessment and details relevant equipment and resources required.

Qualifications

Editorial requirements	Comments by the editor
Standard 9: <ul style="list-style-type: none"> The structure of the information for qualifications complies with the qualification template. 	The structure of the information for the qualifications complies with the qualifications template. While a number of qualifications have been updated to remove the points-based weighting there are still a number of qualifications that use this system.
Standard 10: <ul style="list-style-type: none"> Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template. 	No credit arrangements currently exist between the UEP Electricity Supply Industry - Generation Sector Training Package qualifications and higher education qualifications.

Companion Volumes

Editorial requirements	Comments by the editor
Standard 11: <ul style="list-style-type: none"> A quality assured companion volume implementation guide is available and complies with the companion volume implementation guide template. 	Australian Industry Standards (AIS) provided a Companion Volume Implementation Guide (CVIG) for editing which complies with the CVIG template. The CVIG has been quality assured in accordance with AIS internal processes.

3. Proofreading

Training Package Quality Assurance

Editorial requirements	Comments by the editor
<ul style="list-style-type: none"> • Unit codes and titles and qualification codes and titles are accurately cross-referenced throughout the training package product(s) including mapping information and packaging rules, and in the companion volume implementation guide. 	<p>Unit and qualification codes and titles were cross-referenced throughout the draft components, including packaging rules, mapping document, CVIG and the Case for Endorsement. Minor inconsistencies in unit titles were highlighted and corrected across all components. Six qualifications were fully reviewed with units, prerequisites and imported units being updated.</p> <p>Five qualifications have had some UEP units updated in both core and elective, while imported and prerequisite units have not been updated.</p> <p>It was noted by AIS that not all current UEP Electricity Supply Industry – Generation Sector Training Package units were updated, and the updating of imported units and their prerequisites will be addressed in the next revision.</p>
<ul style="list-style-type: none"> • Units of competency and their content are presented in full. 	<p>The units of competency were provided in full.</p>
<ul style="list-style-type: none"> • The author of the Editorial Report is satisfied with the quality of the training products, specifically with regard to: <ul style="list-style-type: none"> ○ absence of spelling, grammatical and typing mistakes ○ consistency of language and formatting ○ logical structure and presentation of the document. ○ compliance with the required templates 	<p>The units of competency were reviewed for:</p> <ul style="list-style-type: none"> • spelling, grammatical and typing errors • consistency of language and formatting • structure and presentation • compliance with required templates. <p>Minor edits were marked up using track changes and forwarded to AIS to be actioned. At the time of completing the Editorial Report I am satisfied with the quality of the Training Package component with regard to the above points.</p>

Training Package Quality Assurance

Attachment A – Revised units of competency

UEPMNT001	Carry out routine work activities in an electricity supply industry generation environment
UEPMNT002	Carry out routine work activities in an ESI large scale wind generation environment
UEPMNT003	Coordinate maintenance on a wind farm
UEPMNT004	Diagnose and repair faults in large scale wind turbines
UEPMNT005	Diagnose and repair faults in wind turbine control systems
UEPMNT006	Diagnose and repair faults in wind turbine electrical systems
UEPMNT007	Diagnose and repair mechanical systems faults in wind turbines
UEPMNT008	Maintain and monitor wind farm civil assets
UEPMNT009	Maintain large scale wind turbines
UEPMNT010	Maintain wind turbine control systems
UEPMNT011	Maintain wind turbine electrical systems
UEPMNT012	Maintain wind turbine mechanical systems
UEPMNT013	Monitor climatic conditions for renewable electricity generation
UEPMNT014	Test and commission wind turbines
UEPOPL003	Licence to operate a reciprocating steam engine
UEPOPL004	Licence to operate a steam turbine
UEPOPS001	Analyse single protection device operation
UEPOPS002	Apply environmental and sustainable energy procedures
UEPOPS003	Apply quality systems to work
UEPOPS004	Carry out operational checks on in-service electrical plant
UEPOPS005	Clean plant and equipment
UEPOPS006	Collect and analyse hydrological and meteorological data
UEPOPS007	Conduct chemical batching operations
UEPOPS008	Conduct first response within a workplace team
UEPOPS009	Conduct minor electrical maintenance
UEPOPS010	Conduct minor mechanical maintenance
UEPOPS011	Conduct multiple energy source isolation procedures for permit to work
UEPOPS012	Conduct non-routine operational testing
UEPOPS013	Conduct operational checks and carry out corrective action on in-service electrical plant
UEPOPS014	Conduct operational checks on in-service mechanical plant
UEPOPS015	Conduct project management
UEPOPS016	Conduct routine wind turbine maintenance
UEPOPS017	Conduct single energy source isolation procedures for permit to work
UEPOPS018	Conduct water conveyance and control
UEPOPS019	Control electrical energy production
UEPOPS020	Control hydro generation pumping
UEPOPS021	Control permit to work operations
UEPOPS022	Coordinate and direct switching program
UEPOPS023	Coordinate electrical energy production
UEPOPS024	Coordinate first response team operation
UEPOPS025	Coordinate local H.V. networks
UEPOPS026	Coordinate network/system
UEPOPS027	Coordinate operational strategies for power production
UEPOPS028	Coordinate permit to work system
UEPOPS029	Coordinate photovoltaic solar power plant operations
UEPOPS030	Coordinate power generation
UEPOPS031	Coordinate response to critical incidents
UEPOPS032	Coordinate team activities
UEPOPS033	Coordinate the use of contingency plans
UEPOPS034	Coordinate wind farm operations
UEPOPS035	Coordinate workplace communication
UEPOPS036	Develop HV switching programs

Training Package Quality Assurance

UEPOPS037	Ensure compliance with work health and safety policy and procedures
UEPOPS038	Evaluate cost estimations and initiate appropriate solutions
UEPOPS039	Evaluate scheduling of generation plant
UEPOPS040	Facilitate the use of contingency plans for power generation facilities
UEPOPS041	Facilitate workplace communication
UEPOPS042	Implement dam safety surveillance procedures
UEPOPS043	Interpret and analyse multi-operation protection devices
UEPOPS044	Liaise with stakeholders
UEPOPS045	Maintain and utilise records
UEPOPS046	Maintain battery banks and cells
UEPOPS047	Maintain quality systems within the team
UEPOPS048	Manage commissioning and decommissioning
UEPOPS049	Manage critical incidents
UEPOPS050	Manage environmental management systems
UEPOPS051	Manage first response team
UEPOPS052	Manage high voltage network system
UEPOPS053	Manage operational crisis to maintain or restore power system integrity
UEPOPS054	Manage operational strategies for power production
UEPOPS055	Manage permit to work system
UEPOPS056	Manage quality control procedures
UEPOPS057	Manage system restart
UEPOPS058	Manage work health and safety policy and procedures
UEPOPS059	Manage, operate and monitor a gas turbine unit
UEPOPS060	Monitor and coordinate the operation of a combined cycle gas turbine unit
UEPOPS061	Monitor and implement environmental site plans and procedures
UEPOPS062	Monitor and maintain civil assets
UEPOPS063	Monitor and maintain wind farm civil assets
UEPOPS064	Monitor climatic conditions for renewable energy production
UEPOPS065	Monitor implementation of quality control for production and maintenance
UEPOPS066	Monitor power generation plant reliability
UEPOPS067	Monitor the implementation of under frequency load shedding
UEPOPS068	Operate a hydro generator synchronous condenser pump unit
UEPOPS069	Operate air conditioning plant
UEPOPS070	Operate and monitor a boiler unit
UEPOPS071	Operate and monitor a heat recovery steam generator unit
UEPOPS072	Operate and monitor a hydro turbine
UEPOPS073	Operate and monitor a steam turbine
UEPOPS074	Operate and monitor a wind generator
UEPOPS075	Operate and monitor a.c. electrical systems
UEPOPS076	Operate and monitor air conditioning plant and ventilation systems
UEPOPS077	Operate and monitor alkalinity reduction plant
UEPOPS078	Operate and monitor an internal combustion dual fuel reciprocating engine
UEPOPS079	Operate and monitor an internal combustion single fuel reciprocating engine
UEPOPS080	Operate and monitor ash and dust disposal plant
UEPOPS081	Operate and monitor auxiliary steam systems
UEPOPS082	Operate and monitor boiler draught system
UEPOPS083	Operate and monitor boiler steam/water cycle
UEPOPS084	Operate and monitor brine concentrator plant
UEPOPS085	Operate and monitor communications system
UEPOPS086	Operate and monitor compressed air systems
UEPOPS087	Operate and monitor compressed gas systems
UEPOPS088	Operate and monitor condenser and auxiliary cooling systems
UEPOPS089	Operate and monitor d.c. electrical systems
UEPOPS090	Operate and monitor dual fuel firing plant
UEPOPS091	Operate and monitor dust collection plant
UEPOPS092	Operate and monitor fixed fire protection systems
UEPOPS093	Operate and monitor flue gas (NOx) mitigation systems

Training Package Quality Assurance

UEPOPS094	Operate and monitor fuel firing plant - coal
UEPOPS095	Operate and monitor fuel firing plant - gas/oil
UEPOPS096	Operate and monitor fuel supply
UEPOPS097	Operate and monitor fuel supply - coal
UEPOPS098	Operate and monitor gas production plant
UEPOPS099	Operate and monitor generator/alternator
UEPOPS100	Operate and monitor heat exchangers and cooling systems
UEPOPS101	Operate and monitor HRSG hot gas control system
UEPOPS102	Operate and monitor hydro plant auxiliary systems
UEPOPS103	Operate and monitor hydro unit control and protection systems
UEPOPS104	Operate and monitor oil systems
UEPOPS105	Operate and monitor reverse osmosis plant
UEPOPS106	Operate and monitor site services water systems
UEPOPS107	Operate and monitor supervisory control and data acquisition systems
UEPOPS108	Operate and monitor system equipment
UEPOPS109	Operate and monitor water quality monitoring systems
UEPOPS110	Operate and monitor water systems condensate and feedwater
UEPOPS111	Operate and monitor water treatment plant
UEPOPS112	Operate bulk coal handling plant
UEPOPS113	Operate fabric filter dust collection plant
UEPOPS114	Operate HV condition changing apparatus
UEPOPS115	Operate hydroelectric generating plant and auxiliary equipment
UEPOPS116	Operate local HV switchgear
UEPOPS117	Operate local LV. switchgear
UEPOPS118	Operate manual systems
UEPOPS119	Operate waste and contaminated water plant
UEPOPS120	Undertake operational commissioning and decommissioning
UEPOPS121	Perform plant lubrication
UEPOPS122	Perform process plant inspections
UEPOPS123	Perform risk analysis of generation plant
UEPOPS124	Perform switching to a switching program
UEPOPS125	Perform tool store duties
UEPOPS126	Plan a scheduled outage
UEPOPS127	Plan and organise work
UEPOPS128	Produce maintenance plans for generation production plant
UEPOPS129	Produce maintenance strategies for generation production plant
UEPOPS130	Respond to a critical incident
UEPOPS131	Run up a steam turbine
UEPOPS132	Schedule generation
UEPOPS133	Shut down a boiler unit
UEPOPS134	Shut down a gas turbine
UEPOPS135	Shut down a heat recovery steam generator unit
UEPOPS136	Shut down a hydro turbine
UEPOPS137	Shut down a steam turbine
UEPOPS138	Start and run up gas turbine
UEPOPS139	Start and run-up a hydro turbine
UEPOPS140	Start up a boiler unit
UEPOPS141	Start up a heat recovery steam generator unit
UEPOPS142	Transport plant and equipment
UEPOPS143	Tune process plant and equipment
UEPOPS144	Undertake dam safety surveillance
UEPOPS145	Undertake local systems operations

Training Package Quality Assurance

Quality Report Template

Section 1 – Cover page

Information required	Detail
Training Package title and code	UEP Electricity Supply Industry – Generation Sector Training Package Release 2.0
Number of new qualifications and their titles ¹	Nil
Number of revised qualifications and their titles	<p>Eleven (11) revised qualifications:</p> <p>UEP20121 Certificate II in ESI Generation - Operations Support</p> <p>UEP20221 Certificate II in Remote Area Essential Service</p> <p>UEP30121 Certificate III in ESI Generation</p> <p>UEP40121 Certificate IV in ESI Generation</p> <p>UEP40321 Certificate IV in ESI Generation Maintenance - Electrical Electronics</p> <p>UEP40421 Certificate IV in ESI Generation Maintenance (Fabrication)</p> <p>UEP40521 Certificate IV in ESI Generation Maintenance (Mechanical)</p> <p>UEP40621 Certificate IV in Wind Power Generation</p> <p>UEP50121 Diploma of ESI Generation</p> <p>UEP50321 Diploma of ESI Generation (Maintenance)</p> <p>UEP50421 Diploma of ESI Generation Maintenance - Electrical Electronic</p>
Number of new units of competency and their titles	Nil
Number of revised units of competency and their titles	<p>One hundred and fifty-nine (159) new Units of Competency.</p> <p>As per Attachment 1</p>

¹ When the number of training products is high the titles can be presented as an attached list.

Training Package Quality Assurance

Information required	Detail
<p>Confirmation that the panel member is independent of:</p> <ul style="list-style-type: none"> • the Training Package or Training Package components review ('Yes' or 'No') • development and/or validation activities associated with the Case for Endorsement ('Yes' or 'No') • undertaking the Equity and/or Editorial Reports for the training package products that are the subject of this quality report ('Yes' or 'No') 	<p>I confirm through affirmation:</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
Confirmation of the Training Packages or components thereof being compliant with the Standards for Training Packages 2012	These Training Package components are compliant with the Standards for Training Packages 2012.
Confirmation of the Training Packages or components thereof being compliant with the Training Package Products Policy	This Training Package and its component parts are compliant with the Training Package Products Policy.
Confirmation of the Training Packages or components thereof being compliant with the Training Package Development and Endorsement Process Policy	These Training Package components are compliant with the Training Package Development and Endorsement Process Policy.
<p>Panel member's view about whether:</p> <ul style="list-style-type: none"> • the evidence of consultation and validation process being fit for purpose and commensurate with the scope • estimated impact of the proposed changes is sufficient and convincing 	<p>As evidenced by the Case for Endorsement (CfE), and the associated appendices, consultation was sufficient and specific to the project. The Technical Advisory Committees were nationally representative of a broad cross-section of stakeholders.</p> <p>The CfE convincingly outlines the reasons for the revision of these qualifications and the associated new units as an update of the existing Training Package. The impact of these additions is also clear.</p> <p>There are no exception reports to the consultation findings.</p>

Training Package Quality Assurance

Information required	Detail
Name of panel member completing Quality Report	Terry Smith
Date of completion of the Quality Report	24 th May, 2021

Section 2 – Compliance with the Standards for Training Packages 2012

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 1</p> <p>Training Packages consist of the following:</p> <ol style="list-style-type: none"> 1. AISC endorsed components: <ul style="list-style-type: none"> • qualifications • units of competency • assessment requirements (associated with each unit of competency) • credit arrangements 2. One or more quality assured companion volumes (CVIG) 	Yes	<p>I confirm that:</p> <ul style="list-style-type: none"> • units of competency • assessment requirements (associated with each unit of competency) and • the UEP Training Package CVIG <p>are all evident.</p>
<p>Standard 2</p> <p>Training Package developers comply with the Training Package Products Policy</p>	Yes	<p>The Training Package developers have complied with the Training Package Products Policy. All conditions have been met.</p>

Training Package Quality Assurance

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 3</p> <p>Training Package developers comply with the AISC Training Package Development and Endorsement Process Policy</p>	<p>Yes</p>	<p>The Training Package developers have complied with the AISC Training Package Development and Endorsement Process Policy in all aspects: consultation; development; and compliance.</p> <p>Two units UEPOPL003 and UEPS00009 regarding reciprocating steam engines both have an extensive range statement which is compliant even if discouraged in current unit design. In discussing these units with an AIS representative it became clear that these units have some very specific safety considerations that are best covered through a range statement. This is especially important as these units will in the future probably only apply to hobbyist and enthusiasts using this equipment. If the detail contained in the range statement were to be included in the contextual application in the CVIG it would be less likely to be accessed and or discovered in the specific use and safe application of these units.</p> <p>In any event all units are compliant.</p>
<p>Standard 4</p> <p>Units of competency specify the standards of performance required in the workplace</p>	<p>Yes</p>	<p>The standards of performance required in the workplace are specified in the units of competency. They are clearly written in plain English.</p> <p>The standards of performance and associated benchmarks are evident.</p> <p>The elements and associated performance criteria are clear and logically sequenced.</p> <p>The units are well structured and easy to understand and apply.</p>

Training Package Quality Assurance

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 5</p> <p>The structure of units of competency complies with the unit of competency template</p>	Yes	<p>The structure meets the specified template requirements.</p> <p>I note the equity and editorial reports and concur overall with their findings.</p> <p>In reviewing I can confirm that the Foundation Skills are explicit and embedded in the performance criteria throughout all units. This was proven through analysis against the ASQA resource Trigger Words for Foundation Skills.</p> <p>Unit titles are correct and unit applications are clear, including provision of context.</p>
<p>Standard 6</p> <p>Assessment requirements specify the evidence and required conditions for assessment</p>	Yes	<p>Assessment requirements are clear as are the conditions for assessment including the use of appropriate simulation contexts where workplace performance can't be assessed.</p> <p>Performance evidence is specifically related to performance and is a clear and concise summary of the unit's performance requirements.</p> <p>Knowledge evidence is clearly related and specifically linked to the performance criteria of the unit. All components are clear, readily understandable and logical.</p>
<p>Standard 7</p> <p>Every unit of competency has associated assessment requirements. The structure of assessment requirements complies with the assessment requirements template</p>	Yes	<p>All units have associated assessment requirements.</p> <p>The assessment requirements comply with the relevant and specified template and clearly state the volume of evidence required.</p>

Training Package Quality Assurance

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
Standard 8 Qualifications comply with the Australian Qualifications Framework specification for that qualification type	Yes	The revised qualifications comply with the Australian Qualifications Framework specification for the qualification type.
Standard 9 The structure of the information for the Australian Qualifications Framework qualification complies with the qualification template	Yes	The revised qualification structures are compliant.
Standard 10 Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template	Yes	There are no credit arrangements in place, and this is specified.
Standard 11 A quality assured companion volume implementation guide produced by the Training Package developer is available at the time of endorsement and complies with the companion volume implementation guide template.	Yes	A Companion Volume Implementation Guide (CVIG) exists and provides clear and useful information. It also includes clear guidance on the context of the range of job role environment applications in appendix form and has useful advice for implementers and educators.
Standard 12 Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.	Yes	The UEP CVIG is complemented by appendices providing supplementary information. This also makes the information easier to access.

Section 3 – Compliance with the training package quality principles

Note: not all training package quality principles might be applicable to every training package or its components. Please provide a supporting statement/evidence of compliance or non-compliance against each principle.

Quality principle 1. Reflect identified workforce outcomes

Training Package Quality Assurance

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non-compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Driven by industry's needs	Yes	<p>As stated in the CfE:</p> <p>The streaming of the Qualifications allowed for flexibility for the ESI Generation workforce to transition from a model of mostly coal fired steam turbine generation to a mix of thermal (coal), gas (natural, liquefied petroleum and hydrogen), renewable (solar), and large-scale wind generation and power storage to address changes in the ESI Generation industry, including the move to renewable energy power generation, increasing automation of power generation control systems and data analytics.</p> <p>The units and associated revised qualifications appear to meet industry requirements and comprehensively cover key job role areas.</p> <p>The consultation and development associated with the development of these units ensured that it has been driven by industry's needs and expectations.</p>
<p>Compliant and responds to government policy initiatives</p> <p>Training package component responds to the COAG Industry and Skills Council's (CISC) training package-related initiatives or directions, in particular the 2015 training package reforms. Please specify which of the following CISC reforms are relevant to the training product and identify supporting evidence:</p> <ul style="list-style-type: none"> • ensure obsolete and superfluous qualifications are removed from the system 	Yes	<p>The project was driven by the requirement to meet the specific needs of the UEP Energy – Generation Sector.</p> <p>While written for technical specialist roles in an Energy - Generation Supply context the associated competencies are transferrable between similar roles in different sectors.</p> <p>Three Qualifications and 31 Units of Competency with zero enrolments were deleted to meet the AISC directive.</p> <p>Four revised Skill Sets for high-risk licensing and high voltage (H.V.) have also been developed.</p> <p>The CVIG contains detailed information about industry's expectations of training delivery. The CVIG is readily available, in a useable style, to training providers to improve their delivery and to consumers to enable more informed course choices.</p> <p>Pre-requisites have been rationalised and kept to a minimum.</p>

Training Package Quality Assurance

<ul style="list-style-type: none"> • ensure that more information about industry’s expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed course choices • ensure that the training system better supports individuals to move easily from one related occupation to another • improve the efficiency of the training system by creating units that can be owned and used by multiple industry sectors • foster greater recognition of skill sets 		<p>I note the AIS information, which is confirmed in the Editorial Report, that there are some potentially outdated cross-sector units which are currently relevant but need revision. I note that for these units future review will fine tune the coverage and relevancy that these units and the associated qualifications currently provide. These units will be addressed in the next tranche.</p> <p>Where appropriate units of competency from other Training Packages are contained within qualification streams. Notably these are from the MEM, RII, NWP, TLI and UEE Training Packages.</p>
<p>Reflect contemporary work organisation and job profiles incorporating a future orientation</p>	<p>Yes</p>	<p>The units are future oriented and take account of current processes and techniques. Nothing in the language of these units excludes future application.</p> <p>The CVIG also provides critical information on job/role environment contexts.</p>

Quality principle 2: Support portability of skills and competencies including reflecting licensing and regulatory requirements

Training Package Quality Assurance

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Support movement of skills within and across organisations and sectors	Yes	<p>The main objective of these revised units and qualifications is to support movement of skills within and across organisations and sectors. As stated in the CfE:</p> <p>The streaming of the Qualifications allowed for flexibility from a model of mostly coal fired steam turbine generation to a mix of thermal (coal), gas (natural, liquefied petroleum and hydrogen), renewable (solar), and large-scale wind generation and power storage to address changes in the ESI Generation industry, including the move to renewable energy power generation, increasing automation of power generation control systems and data analytics.</p> <p>All qualifications are packaged to facilitate an opportunity to switch occupational streams within industry.</p>
.Promote national and international portability	Yes	These units address the intricate technical integrity requirements specific to this industry, but they are portable within this context and allow for the variety of plant operations and contexts that exist.
Reflect regulatory requirements and licensing	Yes	There are no legislative or regulatory requirements that impact specifically on these units.

Quality principle 3: Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry

Training Package Quality Assurance

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Reflect national consensus	Yes	The CfE clearly demonstrates the wide national consultation that occurred and the areas of national consensus. There are no exception reports.
Recognise convergence and connectivity of skills	Yes	This revised qualifications and associated units clearly address areas of commonality and connectivity across industry sectors, where possible they are written to provide generic context such as working in teams, while simultaneously addressing the technical integrity requirements of the UEP ESI-Generation Sector and associated job roles within a UEP ESI-Generation context. I note the equity reporter's comments that many units contain much of the same/similar PCs with only one or two words different that relate to the context of the unit e.g.: <ul style="list-style-type: none"> ○ UEPMNT007 Diagnose and repair mechanical systems faults in wind turbines ○ UEPMNT006 Diagnose and repair faults in wind turbine electrical systems ○ UEPMNT005 Diagnose and repair faults in wind turbine control systems However this is out of necessity given the specific nature of these job roles.

Quality principle 4: Be flexible to meet the diversity of individual and employer needs including the capacity to adapt to changing job roles and workplaces

Training Package Quality Assurance

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Meet the diversity of individual and employer needs	Yes	The CfE highlights how all relevant sectors and industry representatives were widely consulted and their needs and views incorporated into the development of the units, the associated revised qualifications and skill sets.
Support equitable access and progression of learners	Yes	<p>Where appropriate the units provide flexibility and portability across sectors and are easily accessible through the use of plain English and phrasing. Assessment and context is clear.</p> <p>No unit has entry requirements that are unnecessarily exclusive.</p> <p>The equity reports clearly outlines how the equity provisions in terms of reasonable adjustment, LLN allowances, flexibility and fairness are catered for and specifically addressed in the CVIG.</p>

Training Package Quality Assurance

Quality principle 5: Facilitate recognition of an individual’s skills and knowledge and support movement between the school, vocational education and higher education sectors

Key features	Qual-ity principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Support learner transition between education sectors	N/A	<p>These units and the associated qualification are designed for specific workplace roles requiring a high degree of complexity and compliance where safety of self and others is a key factor. One qualification does allow for an apprenticeship pathway.</p> <p>As mentioned previously there are no higher education arrangements.</p>

Training Package Quality Assurance

Quality principle 6: Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the Training Package Development and Endorsement Process Policy
Support implementation across a range of settings	Yes	The CVIG provides clear advice about implementation and is aided by specific qualification information. Qualification transition arrangements are also outlined. Pathways are clear. The technical nature of these units negates implementation across a range of settings, but does promote transfer within the same sector.
Support sound assessment practice	Yes	<p>The depth and breadth of assessments is consistent and clear as is the amount of required assessments. Sound use is made of real and simulated assessment. Assessment conditions are clearly outlined.</p> <p>The units of competency and associated assessment requirements clearly specify the outcomes required in plain English and provide specific volume and context.</p>
Support implementation	Yes	The product is compliant with TGA/National Register requirements for publication. CVIG provides clear advice about unit application and context.

Training Package Quality Assurance

Equity Report Template

Section 1 – Cover page

Information required	Detail
Training Package title and code	UEP Electricity Supply Industry - Generation Sector Training Package– Release 2.0
Number of new qualifications and their titles ¹	N/A
Number of revised qualifications and their titles	<p>Eleven (11) revised qualifications:</p> <ul style="list-style-type: none"> UEP20121 Certificate II in ESI Generation - Operations Support UEP20221 Certificate II in Remote Area Essential Service UEP30121 Certificate III in ESI Generation UEP40121 Certificate IV in ESI Generation UEP40321 Certificate IV in ESI Generation Maintenance - Electrical Electronics UEP40421 Certificate IV in ESI Generation Maintenance (Fabrication) UEP40521 Certificate IV in ESI Generation Maintenance (Mechanical) UEP40621 Certificate IV in Wind Power Generation UEP50121 Diploma of ESI Generation UEP50321 Diploma of ESI Generation (Maintenance) UEP50421 Diploma of ESI Generation Maintenance - Electrical Electronic
Number of new units of competency and their titles	N/A
Number of revised units of competency and their titles	<p>One hundred and fifty-nine (159) revised units of competency</p> <p>Refer to Attachment A</p>
Confirmation that the draft training package components meet the requirements in Section 2 Equity checklist of draft training package components	Draft training package components meet the requirements in Section 2 Equity checklist of draft training package components.

¹ When the number of training products is high the titles can be presented as an attached list.

Training Package Quality Assurance

Information required	Detail
<p>Is the Equity Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide the name.</p>	<p>No – Equity Report by Karen Thomson – Industry Skills Specialist at AIS</p> <p>Demonstrated experience in analysis of equity issues in the training or educational context</p> <ul style="list-style-type: none"> • Employment with Australian Industry Standards Ltd SSO since July 2018 (Industry Skills Specialist) • Employment with Australian Industry Standards Ltd SSO from August 2016 – January 2017 (Skills Project Specialist) • 6 years with various private RTO's delivering and assessing accredited training from Business, Retail and Hospitality Training Packages. Consideration of equity issues in delivery of training and assessment was mandatory. • Development and implementation of LLN and access and equity programmes for RTOs • Facilitation of short courses to long term unemployed candidates from Job Active Providers <p>Demonstrated understanding of vocational education and training</p> <ul style="list-style-type: none"> • Performed in a variety of roles in the VET Sector • Designed, developed and contextualised training content, material and assessment tools for long term unemployed and disadvantaged students with a variety of learning issues • Prepared compliant paperwork (training and assessment strategies, trainer matrix, session plans, industry consultation, training activity logs, WHS inspection checklists etc) for accredited training programs • Extensive experience in skills recognition/RPL, providing advice and supporting candidates throughout the assessment process (up to Advanced Diploma level) <p>Demonstrated commitment by the person to ongoing professional development</p> <ul style="list-style-type: none"> • Participation in ongoing Commonwealth and State Education and Departmental forums • Professional knowledge updates via forums, newsletters and internal workshops • Completion of courses and professional development programmes related to VET Including: <ul style="list-style-type: none"> ○ AIS PD Workshop - Equity Report Writing ○ AIS PD Workshop – Presentation Skills ○ AIS PD Workshop - Writing Skills Workshop ○ Attending ASQA update meetings ○ Foundation Skills workshop for trainers and assessors <p>Details of relevant qualifications</p> <ul style="list-style-type: none"> • TAELLN401A Address adult language, literacy and numeracy skills • Advanced Diploma of Hospitality • Certificate IV in Training and Assessment • Diploma of Business

Training Package Quality Assurance

Information required	Detail
Date of completion of the report	24 May 2021

Training Package Quality Assurance

Section 2 – Equity checklist of draft training package components

Equity requirements	Equity reviewer comments
<p>The training package component(s) comply with Standard 2 of the Standards for Training Packages 2012. The standard requires compliance with the Training Package Products Policy, specifically with the access and equity requirements:</p> <ul style="list-style-type: none"> • Training Package developers must meet their obligations under Commonwealth anti-discrimination legislation and associated standards and regulations. • Training Package developers must ensure that Training Packages are flexible and that they provide guidance and recommendations to enable reasonable adjustments in implementation. 	<p>Provide brief commentary on whether the draft endorsed components meet each of the equity requirements</p> <p>Yes, the qualifications and units reviewed in this report comply with the access and equity requirements of the Training Package Products Policy (TPPP).</p> <p>Examples were sighted in the Assessment Conditions where the needs of the LLN needs of the candidate are considered.</p> <p>Flexibility and reasonable adjustment are supported through a standard statement in the Assessment Conditions specifically regarding the Principles of Assessment which supports reasonable adjustment:</p> <p style="padding-left: 40px;">‘Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.’</p> <p>This stipulates that assessments must be adjusted appropriately taking into consideration the additional needs of the student in both training and assessment.</p> <p>Reasonable adjustment advice is provided in the UEP CVIG under the Access and Equity section.</p>

Section 3 - Training Package Quality Principles

Quality Principle 4

Be **flexible** to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces.

Key features

Do the units of competency meet the diversity of individual and employer needs and support **equitable access and progression of learners**?

What evidence demonstrates that the units of competency and their associated assessment requirements are **clearly written** and have consistent breadth and depth so that they support implementation across a range of settings?

Are there **other examples** that demonstrate how the key features of **flexibility are being achieved**?

Training Package Quality Assurance

Equity requirements	Equity reviewer comments
<p>1. What evidence demonstrates that the draft components provide flexible qualifications/units of competency that enable application in different contexts?</p>	<p>The units of competency reviewed meet the diverse needs of learners through a substantial range of qualifications and units.</p> <p>The inclusion of units of competency imported from other Training Packages provides greater flexibility of choice and provides skills that are transferable.</p> <p>Units of competency enable the application of skills and knowledge in different contexts including:</p> <ul style="list-style-type: none"> • a format of competency design that provides an easy to follow structure for workplace operations and RTO training/assessment • language in each section of the units and assessment requirements are at the appropriate level for those operating in the industry • PCs relate well to the elements and support consistent work processes, although to note that many units contain much of the same/similar PCs with only one or two words different that relate to the context of the unit eg: <ul style="list-style-type: none"> ○ UEPMNT007 Diagnose and repair mechanical systems faults in wind turbines ○ UEPMNT006 Diagnose and repair faults in wind turbine electrical systems ○ UEPMNT005 Diagnose and repair faults in wind turbine control systems <p>There is the capacity for units of competency to be adapted to changing job roles within the Energy Sector industry through appropriate contextualisation in program design.</p> <p>At qualification level, flexibility is demonstrated in the qualification packaging rules of the below three qualifications which provide for specific job roles with specialisation fields:</p> <ul style="list-style-type: none"> • UEP30121 Certificate III in ESI Generation • UEP40121 Certificate IV in ESI Generation • UEP50121 Diploma of ESI Generation <p>In addition to this, adding to the flexibility of the six qualifications in the original project is the removal of weighting points.</p> <p>The following five qualifications still retain weighting points and were not included in the original project, however were updated with recoded UEP units in the core and electives:</p> <p>UEP40321 Certificate IV in ESI Generation Maintenance - Electrical Electronics</p>

Training Package Quality Assurance

Equity requirements	Equity reviewer comments
	<p>UEP40421 Certificate IV in ESI Generation Maintenance (Fabrication)</p> <p>UEP40521 Certificate IV in ESI Generation Maintenance (Mechanical)</p> <p>UEP50321 Diploma of ESI Generation (Maintenance)</p> <p>UEP50421 Diploma of ESI Generation Maintenance - Electrical Electronic</p> <p>The Range of Conditions generic statement allows for “essential operating conditions and any other variables essential to the work environment”.</p>
2. Is there evidence of multiple entry and exit points?	<p>The UEP Electricity Supply Industry - Generation Sector Training Package provides open entry at each of the AQF levels. There is a table at Attachment E in the CVIG indicating the pathways that can be followed.</p> <p>The pathway advice in the CVIG advises that none of the UEP Electricity Supply Industry - Generation Sector Training package qualifications have been identified as being suitable for VET in Schools. Qualifications at AQF 2 level are not prerequisites for the higher-level qualifications which allows for easy access.</p> <p>Reviewed units without pre-requisites offer a variety of multiple entry and exit points.</p>
3. Have prerequisite units of competency been minimised where possible?	<p>The developer through the IRC and the TAC have been proactive in removing the weighting points system previously used and reducing the level of pre-requisite units in the wind turbine units, for example:</p> <ul style="list-style-type: none"> • UEPMNT003 Coordinate maintenance on a wind farm <p>has reduced the prerequisites from 18 down to 3. This was done through careful job analysis on what is currently completed on the job and determining the actual need for them.</p>
4. Are there other examples of evidence that demonstrate how the key features of the flexibility principle are being achieved?	<p>The packaging rules of the qualifications support flexibility through a statement allowing for a number of elective units that “may be selected, with appropriate contextualisation, from a qualification in this or any endorsed Training Package, provided selected units contribute to the vocational outcome of the qualification.”</p> <p>Further flexibility is included in the portion/selection of units that can be sourced from within the qualifications themselves.</p>

Training Package Quality Assurance

Equity requirements	Equity reviewer comments
	<p>In this reviewer’s opinion the UEP qualifications have been based on a structure in relation to the industry occupational outcome requirements.</p> <p>The CVIG offers further information and advice on licensing and regulatory requirements.</p>

Quality Principle 5

Facilitate **recognition** of an individual’s skills and knowledge and support movement between the school, vocational education and higher education sectors.

Key features

Support learner transition between education sectors.

Equity requirements	Equity reviewer comments
<p>1. What evidence demonstrates pathways from entry and preparatory level as appropriate to facilitate movement between schools and VET, from entry level into work, and between VET and higher education qualifications?</p>	<p>Qualifications reviewed in this report are suitable for delivery via an Australian Apprenticeship pathway however none of the UEP Electricity Supply Industry - Generation Sector Training package qualifications are identified as being suitable for VET in Schools.</p> <p>Currently, there are no specified arrangements between qualifications in this Training Package and higher education qualifications.</p> <p>The Pathways advice chart in the CVIG indicates both vertical and horizontal pathways into, between and from the various AQF qualification levels.</p> <p>Learner transition between education sectors is facilitated via VET qualifications.</p>

Quality Principle 6

Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements.

Key features

Support implementation across a range of settings and support sound assessment practices.

Training Package Quality Assurance

Equity requirements	Equity reviewer comments
<p>1. Does the Companion Volume Implementation Guide include advice about:</p> <ul style="list-style-type: none"> • Pathways • Access and equity • Foundation skills? <p>(see Training Package Standard 11)</p>	<p>The CVIG includes advice on the following:</p> <ul style="list-style-type: none"> • Pathways • Access and Equity • Foundation Skills
<p>2. Are the foundation skills explicit and recognisable within the training package and do they reflect and not exceed the foundation skills required in the workplace?</p>	<p>Overall the relevant foundation skills are recognisable in the training package. They are embedded into the units, are appropriate for the job roles and reflect the complexity of job tasks.</p> <p>Simple, concise language and clear articulation of assessment requirements is present. Assessment processes can be across a range of settings and the support of sound assessment practices is ensured in the structure of the language.</p>

Units of Competency

Code	Title
UEPMNT001	Carry out routine work activities in an electricity supply industry generation environment
UEPMNT002	Carry out routine work activities in an ESI large scale wind generation environment
UEPMNT003	Coordinate maintenance on a wind farm
UEPMNT004	Diagnose and repair faults in large scale wind turbines
UEPMNT005	Diagnose and repair faults in wind turbine control systems
UEPMNT006	Diagnose and repair faults in wind turbine electrical systems
UEPMNT007	Diagnose and repair mechanical systems faults in wind turbines
UEPMNT008	Maintain and monitor wind farm civil assets
UEPMNT009	Maintain large scale wind turbines
UEPMNT010	Maintain wind turbine control systems
UEPMNT011	Maintain wind turbine electrical systems
UEPMNT012	Maintain wind turbine mechanical systems
UEPMNT013	Monitor climatic conditions for renewable electricity generation

Training Package Quality Assurance

Code	Title
UEPMNT014	Test and commission wind turbines
UEPOPL003	Licence to operate a reciprocating steam engine
UEPOPL004	Licence to operate a steam turbine
UEPOPS001	Analyse single protection device operation
UEPOPS002	Apply environmental and sustainable energy procedures
UEPOPS003	Apply quality systems to work
UEPOPS004	Carry out operational checks on in-service electrical plant
UEPOPS005	Clean plant and equipment
UEPOPS006	Collect and analyse hydrological and meteorological data
UEPOPS007	Conduct chemical batching operations
UEPOPS009	Conduct minor electrical maintenance
UEPOPS010	Conduct minor mechanical maintenance
UEPOPS011	Conduct multiple energy source isolation procedures for permit to work
UEPOPS012	Conduct non-routine operational testing
UEPOPS013	Conduct operational checks and carry out corrective action on in-service electrical plant
UEPOPS014	Conduct operational checks on in-service mechanical plant
UEPOPS015	Conduct project management
UEPOPS016	Conduct routine wind turbine maintenance
UEPOPS017	Conduct single energy source isolation procedures for permit to work
UEPOPS018	Conduct water conveyance and control
UEPOPS019	Control electrical energy production
UEPOPS020	Control hydro generation pumping
UEPOPS021	Control permit to work operations
UEPOPS022	Coordinate and direct switching program
UEPOPS023	Coordinate electrical energy production
UEPOPS024	Coordinate first response team operation
UEPOPS025	Coordinate local H.V. networks
UEPOPS026	Coordinate network/system
UEPOPS027	Coordinate operational strategies for power production
UEPOPS028	Coordinate permit to work system

Training Package Quality Assurance

Code	Title
UEPOPS029	Coordinate photovoltaic solar power plant operations
UEPOPS030	Coordinate power generation
UEPOPS031	Coordinate response to critical incidents
UEPOPS032	Coordinate team activities
UEPOPS033	Coordinate the use of contingency plans
UEPOPS034	Coordinate wind farm operations
UEPOPS035	Coordinate workplace communication
UEPOPS036	Develop H.V. switching programs
UEPOPS037	Ensure compliance with Work Health and Safety policy and procedures
UEPOPS038	Evaluate cost estimations and initiate appropriate solutions
UEPOPS039	Evaluate scheduling of generation plant
UEPOPS040	Facilitate the use of contingency plans for power generation facilities
UEPOPS041	Facilitate workplace communication
UEPOPS042	Implement dam safety surveillance procedures
UEPOPS043	Interpret and analyse multi-operation protection devices
UEPOPS044	Liaise with stakeholders
UEPOPS045	Maintain and utilise records
UEPOPS046	Maintain battery banks and cells
UEPOPS047	Maintain quality systems within the team
UEPOPS048	Manage commissioning and decommissioning
UEPOPS049	Manage critical incidents
UEPOPS050	Manage environmental management systems
UEPOPS051	Manage first response team
UEPOPS052	Manage high voltage network system
UEPOPS053	Manage operational crisis to maintain or restore power system integrity
UEPOPS054	Manage operational strategies for power production
UEPOPS055	Manage permit to work system
UEPOPS056	Manage quality control procedures
UEPOPS057	Manage system restart
UEPOPS058	Manage Work Health and Safety policy and procedures

Training Package Quality Assurance

Code	Title
UEPOPS059	Manage, operate and monitor a gas turbine unit
UEPOPS060	Monitor and coordinate the operation of a combined cycle gas turbine unit
UEPOPS061	Monitor and implement environmental site plans and procedures
UEPOPS062	Monitor and maintain civil assets
UEPOPS063	Monitor and maintain wind farm civil assets
UEPOPS064	Monitor climatic conditions for renewable energy production
UEPOPS065	Monitor implementation of quality control for production and maintenance
UEPOPS066	Monitor power generation plant reliability
UEPOPS067	Monitor the implementation of under frequency load shedding
UEPOPS068	Operate a hydro generator synchronous condenser pump unit
UEPOPS069	Operate air conditioning plant
UEPOPS070	Operate and monitor a boiler unit
UEPOPS071	Operate and monitor a heat recovery steam generator unit
UEPOPS072	Operate and monitor a hydro turbine
UEPOPS073	Operate and monitor a steam turbine
UEPOPS075	Operate and monitor a.c. electrical systems
UEPOPS076	Operate and monitor air conditioning plant and ventilation systems
UEPOPS077	Operate and monitor alkalinity reduction plant
UEPOPS078	Operate and monitor an internal combustion dual fuel reciprocating engine
UEPOPS079	Operate and monitor an internal combustion single fuel reciprocating engine
UEPOPS080	Operate and monitor ash and dust disposal plant
UEPOPS081	Operate and monitor auxiliary steam systems
UEPOPS082	Operate and monitor boiler draught system
UEPOPS083	Operate and monitor boiler steam/water cycle
UEPOPS084	Operate and monitor brine concentrator plant
UEPOPS085	Operate and monitor communications system
UEPOPS086	Operate and monitor compressed air systems
UEPOPS087	Operate and monitor compressed gas systems
UEPOPS088	Operate and monitor condenser and auxiliary cooling systems
UEPOPS089	Operate and monitor d.c. electrical systems

Training Package Quality Assurance

Code	Title
UEPOPS090	Operate and monitor dual fuel firing plant
UEPOPS091	Operate and monitor dust collection plant
UEPOPS092	Operate and monitor fixed fire protection systems
UEPOPS093	Operate and monitor flue gas (NOx) mitigation systems
UEPOPS094	Operate and monitor fuel firing plant (coal)
UEPOPS095	Operate and monitor fuel firing plant -gas/oil
UEPOPS096	Operate and monitor fuel supply
UEPOPS097	Operate and monitor fuel supply -Coal
UEPOPS098	Operate and monitor gas production plant
UEPOPS099	Operate and monitor generator/alternator
UEPOPS100	Operate and monitor heat exchangers and cooling systems
UEPOPS101	Operate and monitor HRSG hot gas control system
UEPOPS102	Operate and monitor hydro plant auxiliary systems
UEPOPS103	Operate and monitor hydro unit control and protection systems
UEPOPS104	Operate and monitor oil systems
UEPOPS105	Operate and monitor reverse osmosis plant
UEPOPS106	Operate and monitor site services water systems
UEPOPS107	Operate and monitor supervisory, control and data acquisition systems
UEPOPS108	Operate and monitor system equipment
UEPOPS109	Operate and monitor water quality monitoring systems
UEPOPS110	Operate and monitor water systems condensate and feedwater
UEPOPS111	Operate and monitor water treatment plant
UEPOPS112	Operate bulk coal handling plant
UEPOPS113	Operate fabric filter dust collection plant
UEPOPS114	Operate H.V. condition changing apparatus
UEPOPS115	Operate hydroelectric generating plant and auxiliary equipment
UEPOPS116	Operate local H.V. switchgear
UEPOPS117	Operate local L.V. switchgear
UEPOPS118	Operate manual systems
UEPOPS119	Operate waste and contaminated water plant

Training Package Quality Assurance

Code	Title
UEPOPS120	Operational commissioning and decommissioning
UEPOPS121	Perform plant lubrication
UEPOPS122	Perform process plant inspections
UEPOPS123	Perform risk analysis of generation plant
UEPOPS124	Perform switching to a switching program
UEPOPS125	Perform tool store duties
UEPOPS126	Plan a scheduled outage
UEPOPS127	Plan and organise work
UEPOPS128	Produce maintenance plans for generation production plant
UEPOPS129	Produce maintenance strategies for generation production plant
UEPOPS130	Respond to a critical incident
UEPOPS131	Run up a steam turbine
UEPOPS132	Schedule generation
UEPOPS133	Shut down a boiler unit
UEPOPS134	Shut down a gas turbine
UEPOPS135	Shut down a heat recovery steam generator unit
UEPOPS136	Shut down a hydro turbine
UEPOPS137	Shut down a steam turbine
UEPOPS138	Start and run up gas turbine
UEPOPS139	Start and run-up a hydro turbine
UEPOPS140	Start up a boiler unit
UEPOPS141	Start up a heat recovery steam generator unit
UEPOPS142	Transport plant and equipment
UEPOPS143	Tune process plant and equipment
UEPOPS144	Undertake dam safety surveillance
UEPOPS145	Undertake local systems operations

Training Package Quality Assurance

Attachment G: Letters of Support

22nd March 2021

Mr Paul Walsh

Chief Executive Officer

Australian Industry Standards

Level 2, 31 Market Street South

Melbourne VIC 3205

Dear Mr Walsh

Re: ESI GENERATION INDUSTRY TRAINING PACKAGE R 2.0 - Letter of support

It is confirmed that I have engaged in communication regarding the initiative to review material within the ESI Generation Industry Training Package R 2.0, specifically:

Operations Personnel project

- reviewed one hundred and forty-eight Units of Competency
- revised four Qualifications
- reviewed four Skill Sets

The material reviewed addresses the skills needs to support workforce development.

I am pleased to support ESI Generation Industry Training Package Release 2.0.

Yours sincerely

Dev Sharma

Electrical Engineer

AGL Macquarie

Training Package Quality Assurance

IAS Electrical Pty Ltd

ABN 65 619 044 184
Electrical Engineering Consultants & Contractors
8 Harrie Rowland Place Gunnedah NSW 2380
Phone: 02 [67421427](tel:67421427) [Mob: 0400037399](tel:0400037399)

|
7th April 2021

Mr Paul Walsh

Chief Executive Officer

Australian Industry Standards

Level 2, 31 Market Street South

Melbourne VIC 3205

Dear Mr Walsh

Re: ESI GENERATION INDUSTRY TRAINING PACKAGE R 2.0 - Letter of support

It is confirmed that our organisation has engaged in communication regarding the initiative to review material within the ESI Generation Industry Training Package R 2.0, specifically:

Operations Personnel project

- reviewed one hundred and forty-eight Units of Competency
- revised four Qualifications
- reviewed four Skill Sets

The material reviewed addresses the skills needs to support workforce development.

I am pleased to support ESI Generation Industry Training Package Release 2.0, and look forward to further involvement in assisting to develop more training packages.

Yours sincerely

Igor Skofic

[BEng\(Elec\) MBA RPEQ 18105 EC30965](#)

Director / Principal Engineer

IAS Electrical Pty Ltd

Training Package Quality Assurance

Memo



To: Mr Paul Walsh
Chief Executive Officer
Australian Industry Standards

From: Adam Mullins

cc: Raja Ginting

Date: March 16, 2021

Re: Letter of Support - Wind Power Generation

Dear Mr Walsh

Re: UEP - ESI Generation Sector Training Package Release 2.0 - Letter of support

It is confirmed that our organisation has engaged in communication regarding the initiative to review material within the ESI Generation Sector Training Package Release 2.0, specifically:

Wind Power Generation project

- Review of one Qualification
- Review of 13 Units of Competency

The material reviewed addresses the skills needs to support workforce development.

I am pleased to support UEP - ESI Generation Sector Training Package Release 2.0.

Yours sincerely

Adam Mullins
Operations Supervisor
WOOLNORTH RENEWABLES
adam.mullins@woolnorthwind.com.au

Training Package Quality Assurance