



Training Accreditation Council
WESTERN AUSTRALIA

Strategic Industry Audit Report

2012 Strategic Industry Audit of
qualifications which lead to an electrician's
licence in Western Australia

www.tac.wa.gov.au

The Training Accreditation Council conducted a Strategic Industry Audit into the two qualifications which lead to an electrician's licence in Western Australia, UEE30807 Certificate III in Electrotechnology Electrician and MEM30405 Certificate III in Engineering Tradesperson – Electrical/Electronic. The outcome of the audits, including key findings and recommendations are contained within this report.

2012 Strategic Industry Audit of qualifications which lead to an electrician's licence in Western Australia

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Acronyms

AQF	Australian Qualifications Framework
AQTF	Australian Quality Training Framework
ASQA	Australian Skills Quality Authority
DTWD	Department of Training and Workforce Development
ERAC	Electrical Regulatory Authorities Council
MEM05	Metals and Engineering Training Package
MEM30405	Certificate III in Engineering – Electrical/Electronic Trade
NUELAC	National Uniform Electrical Licensing Advisory Council
RPL	Recognition of Prior Learning
RTO	Registered Training Organisation
SIA	Strategic Industry Audit
TAC	Training Accreditation Council (of Western Australia)
UEE07	Electrotechnology Training Package [superseded by UEE11]
UEE30807	Certificate III in Electrotechnology Electrician
UEE30811	Certificate III in Electrotechnology Electrician
VET	Vocational Education and Training
WA	Western Australia

Acknowledgement

The Training Accreditation Council would like to thank and acknowledge the Reference Group members, the technical advisors and the RTOs for their participation and assistance in the strategic industry audit.

Executive Summary

Background and scope of audit

The Training Accreditation Council (the Council), the body responsible for the registration of training organisations delivering only in Western Australia (WA), endorsed a Strategic Industry Audit (SIA) of qualifications which lead to an electrician's licence in WA. The SIA was initiated in response to concerns by industry about the quality of the nationally recognised training being delivered by Registered Training Organisations (RTOs) in WA.

The objectives of the audit were to:

1. determine the level of compliance with the *Australian Quality Training Framework (AQTF) Essential Conditions and Standards for Continuing Registration* of individual RTOs
2. identify and analyse key areas of compliance and non-compliance
3. identify key issues impacting on training and assessment outcomes and good training and assessment practice
4. provide comment on whether systemic issues impact on the delivery of training and assessment services within the qualifications; and
5. recommend strategies to address key issues and to improve the quality of training and assessment for qualifications linked to electrical licensing.

The SIA focused on the two qualifications leading to an electrician's licence, UEE30807 Certificate III in Electrotechnology Electrician and MEM30405 Certificate III in Engineering – Electrical/Electronic Trade. A Reference Group was established to support the SIA.

The SIA included a preliminary survey of RTOs, site audits, student and employer interviews and a survey of employers of electrical apprentices. Technical advisors accompanied the auditors on the site visits, to provide advice on current industry and licensing requirements.

All RTOs delivering or intending to deliver one or both qualifications in WA were selected for audit. One of the identified 12 RTOs was not audited as part of this audit round, as it had a sanction placed on its registration prior to the audit. Eleven RTOs were audited as part of the SIA.

Key findings

Overall, the audit highlighted variable levels of compliance with the *AQTF Essential Conditions and Standards for Continuing Registration*.

- 27% (3) of the RTOs were found to be fully compliant at the time of the audit
- 18% (2) had minor non-compliances
- 46% (5) had significant non-compliances
- 9% (1) was found to have critical non-compliances

Seven (64%) of the RTOs audited were found to be non-compliant in relation to assessment practices (AQTF Standards 1.5a and 1.5b). One RTO was found to be critically non-compliant against these Standards and five RTOs were significantly non-compliant. Five of these seven RTOs were also non-compliant against Standard 1.5c, with one RTO being critically non-complaint and three were found to be significantly non-compliant.

There was a high level of compliance with the AQTF Conditions of Registration audited. There was also a high level of compliance against the AQTF Standards relating to trainers and assessors (Standard 1.4) and client services (Standard 2, excluding Standard 2.4).

The Council's processes provide RTOs found non-compliant at audit an opportunity to rectify these non-compliances within 20 working days. The seven RTOs with minor or significant non-compliances addressed all non-compliances within this period. The RTO with critical non-compliances did not address all non-compliances within the rectification period, and the matter has been referred to the Council for further action.

Key issues identified during the audit process were:

- assessments not meeting training package requirements and lack of evidence that instruments and tools used gathered appropriate and sufficient evidence to assess competency
- the lack of systematic strategies to provide for the integration of institution based and on the job training
- confusion about the integration of the Capstone Assessment for licensing purposes with the training package qualification.

Recommendations

The following recommendations are proposed to address the key findings of the SIA:

Recommendation: Ongoing compliance

- 1) The Training Accreditation Council ensures that RTOs audited for the current or revised Certificate III qualifications which lead to an electrician's licence, including all new applications, be subject to a site audit, with technical advisors in attendance where possible.
- 2) The Training Accreditation Council to undertake monitoring audits of all RTOs that were found to have significant or critical non-compliances within 12 months.

Recommendation: Assessment

- 3) The Training Accreditation Council will liaise with the relevant government departments and other stakeholders to facilitate professional development activities for this sector with a focus on improving assessment skills.

Recommendation: Integration of institution based and on the job training

- 4) The Training Accreditation Council to request the Electrical, Utilities and Public Administration Training Council and Engineering and Automotive Training Council to coordinate, for their respective industry areas, the development of a good practice model for gathering, verifying and validating workplace evidence.

Recommendation: Quality Assurance of the Electricians Licence process in Western Australia

- 5) The Training Accreditation Council and EnergySafety, as the electrical licensing authority, develop formal arrangements to ensure that the Council is fully aware of current licensing requirements and that EnergySafety is able to provide technical advisors as required for Australian Quality Training Framework (AQTF) audits.

1. Introduction

This report outlines the Strategic Industry Audit (SIA) of training for qualifications leading to an electrician's licence in Western Australia (WA). The SIA was conducted in 2012 by the Training Accreditation Council (TAC). The report outlines the scope and methodology of the audit, the main findings and recommendations to address the key issues identified in the audit.

Background

The Training Accreditation Council is an independent statutory body that provides for quality assurance and recognition processes for vocational education and training in WA. The Council operates within the National Skills Framework and is the WA Registering Body and Course Accrediting Body under the Australian Quality Training Framework (AQTF). The AQTF is a set of nationally agreed quality assurance arrangements for training and assessment services delivered by training organisations. The AQTF provides a national set of standards which assures nationally consistent, high-quality training and assessment services for the clients of Australia's vocational education and training system.

The Council conducts a range of audits of Registered Training Organisations (RTOs) to ensure on-going compliance with the *AQTF Essential Conditions and Standards for Continuing Registration*. A SIA is conducted to confirm that a RTO's training and assessment services are meeting the requirements of a particular industry or licensing authority.

The SIA was initiated in response to concerns raised by industry about the quality of nationally recognised training being delivered by RTOs in Western Australia. The SIA focused on the two qualifications leading to an electrician's licence, UEE30807 Certificate III in Electrotechnology Electrician and MEM30405 Certificate III in Engineering – Electrical/Electronic Trade and was timed to pre-empt the move of electrical licensing to the National Occupational Licensing System.

Major industry concerns include: the appropriateness of the apprenticeship pathways; the delivery strategies; workplace assessments and validity of the Capstone Assessment (see below for more detail), which is undertaken in the final three months of the apprenticeship.

A Reference Group was established to support the SIA. It comprised of senior representatives from EnergySafety, two Training Councils, employer and group training representatives, the Department of Training and Workforce Development (DTWD) (ApprentiCentre) and the TAC Secretariat. The Reference Group representatives have a strong understanding of the qualifications, the industry, licensing and regulatory requirements and issues impacting on the electrical industry.

The role and membership of the Reference Group is provided at **Appendix A**.

The Reference Group provided input into the priorities, scope, audit approach and technical expertise on specific industry and licensing requirements. The Group also reviewed and endorsed the draft report and recommendations for submission to the Council for consideration.

The SIA focussed on training and assessment of the qualifications in WA and the findings of the audit are contained in the body of this report.

Overview of the electrical industry

Electricity has such a high potential risk associated with its transmission, distribution and use that governments regulate to control the standard of the product and to ensure the safe application of electricity. The risks associated with working with electricity are extremely high, a licensing system is in place to ensure that only competent workers carry out electrical installing work. In Western

Australia, the *Electricity (Licensing) Regulations 1991* provide that electrical work may only be carried out by persons with the appropriate electrical licence unless it is a type of work that is exempted by regulation¹.

The occupational licensing of electrical workers is regulated in Western Australia by *EnergySafety*, through the Department of Commerce. The electrical worker licences are issued by the Electrical Licensing Board.

The Electrical Licensing Board issues licences for the following type of work:

- electrical contracting work – to electrical contractors
- electrical installing work – to electricians and is valid for up to five years
- electrical training – to apprentices and trainees
- restricted electrical work – to restricted electrical workers².

Further information about the electrical licensing industry in WA is provided in **Appendix B**.

To be granted a licence by *EnergySafety*, or any other Electrical Licensing regulators in Australia, the apprentice must be able to demonstrate that they can meet a nationally agreed minimum standard. The RTOs that deliver this nationally recognised training must satisfy specified training and assessment requirements so that on completion of their training the apprentice will be able to obtain an electrician's licence. These requirements are:

- achievement of 66 specified Essential Performance Capabilities, as prescribed by the National Uniform Electrical Licensing Advisory Council in the "List of Essential Performance Capability Requirements for Licensed Electricians"³ [see **Attachment 1**]
- achievement of a "Capstone Assessment" which tests the apprentices towards the end of training to confirm that they have attained the most critical of the "List of Essential Performance Capability Requirements for Licensed Electricians". The format of this assessment is a combination of written and practical assessment covering all of the nominated critical items.

RTOs must apply to *EnergySafety* for approval of its electrician training scheme.

The Capstone Assessment is a final 'safety' assessment conducted towards the end of the apprenticeship. It covers the 32 critical items of the 66 Essential Performance Capability Requirements for Licensed Electricians. Evidence of successful completion of the Capstone Assessment is required before an Electrician's licence can be issued by the Electrical Licensing Board. The Capstone Assessment consists of mandated written and practical components. Implementation information, describing the process RTOs must adopt in WA to ensure that persons training as electricians meet national licensing arrangements, has been developed and agreed to by *EnergySafety*, DTWD and the WA RTO Electrical Reference Group.

¹ Information from *EnergySafety*'s website, www.commerce.wa.gov.au/EnergySafety

² the holder of a restricted electrical worker's licence is not permitted to carry out the installation or alterations to fixed wiring or to repair or replace items such as power points, lighting fittings etc

³ The "List of Essential Performance Capability Requirements for Licensed Electricians" are the minimum capabilities expected of a licensed electrician, which are endorsed by the National Uniform Electrical Licensing Advisory Council (NUELAC) and subsequently approved for use by the various Licensing Authorities by the Electrical Regulatory Authorities Council (ERAC) has been embedded in national curriculum since 2001.

Relationship between training and the issue of licences in Western Australia

There are two national training packages that contain qualifications which contribute to an electrician's licence:

- UEE07 Electrotechnology - UEE30807 Certificate III in Electrotechnology Electrician / UEE30811 Certificate III in Electrotechnology Electrician⁴
- MEM05 Metals and Engineering - MEM30405 Certificate III in Engineering – Electrical/Electronic Trade and MEM40105 Certificate IV in Engineering, with sufficient electrical installation work carried out on the job.

Successful attainment of MEM30405 Certificate III in Engineering – Electrical/Electronic Trade leads to a restricted electrical fitters licence, without completion of the Capstone Assessment. Should candidates wish to obtain an electrician's licence, additional training and sufficient electrical installation experience is required, prior to attempting and passing the Capstone Assessment.

In WA both of these qualifications are deemed 'Class A' under the *Vocational Education and Training Act 1996* and can only legally be delivered through an apprenticeship pathway or through a skills recognition pathway.

In May 2010, following a review of the effectiveness of the qualifications and electrical safety regulators by the Electrical Regulatory Authorities Council (ERAC), it was determined that the MEM30405 Certificate III in Engineering – Electrical/Electronic Trade qualification does not adequately ensure training delivery or assessment of the competence necessary for the issue of an electrician's licence and that this qualification is more suited for an 'electrical fitter'. Currently this decision impacts apprentices who will be awarded the MEM30405 qualification on or after 30 September 2015, but who will only be entitled to an Electrician's Licence endorsed Electrical Fitting Work Only and will not be entitled to undertake the Capstone Assessment.⁵

The Reference Group members have provided advice that this position may change prior to this date, as the Manufacturing Industry Skills Council (MSA) responsible for the Metals and Engineering Training Package is working with ERAC on amending the qualification to allow it to be recognised for the licence.

There are transition arrangements in place for completing apprentices awarded the qualification prior to this date, which include statements to support the type of electrical installing work completed on-the-job during the apprenticeship.

⁴ UEE308011 Certificate III in Electrotechnology Electrician was available on the national register, www.training.gov.au, on 16 March 2012.

⁵ EnergySafety fact sheet "Certificate III in Engineering-electrical/electronic trade qualification for licensing", August 2012

2. Scope of the audit

2.1 Audit objectives

The **objectives** of the audit were to:

1. determine the level of compliance with the *Australian Quality Training Framework (AQTF) Essential Conditions and Standards for Continuing Registration* of individual RTOs delivering nationally recognised qualifications leading to an electrician's license
2. identify and analyse key areas of compliance and non-compliance with the *AQTF Essential Conditions and Standards for Continuing Registration* for RTOs delivering qualifications leading to an electrician's license
3. identify key issues impacting on training and assessment outcomes and good training and assessment practice
4. provide comment on whether there are systemic issues which impact of the delivery of training and assessment services for qualifications leading to electrical licensing; and
5. recommend strategies to address key issues and to improve the quality of training and assessment for qualifications linked to electrical licensing, enhancing the working relationship with industry regulators and future audit processes.

The **outcome** for this strategic industry audit was to achieve increased industry confidence in the quality assurance of the delivery and assessment of nationally recognised training for electrical trades in Western Australia, which lead to a licensed outcome.

2.2 Audit focus

The Reference Group determined the SIA would focus on:

1. RTOs actively offering or intending to offer the following qualifications in WA:
 - UEE30807 Certificate III in Electrotechnology Electrician and/or
 - MEM30405 Certificate III in Engineering – Electrical/Electronic Trade
2. The following units of competency for each qualification:
 - UEE30807 Certificate III in Electrotechnology Electrician
 - UEENEEG005B Verify compliance and functionality of general electrical installations (core unit) [essential]
 - UEENEEG002B Solve problems in single and three phase low voltage circuits (core unit) and/or
 - UEENEEG004B Install low voltage electrical apparatus and associated equipment (core unit)
 - MEM30405 Certificate III in Engineering – Electrical/Electronic Trade
 - MEM18051B Fault find and repair/rectify complex electrical circuits (Group A elective)
 - MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. (Group A elective)
3. All AQTF Essential Standards for Continuing Registration and a sample of AQTF Essential Conditions for Continuing Registration (listed in **Appendix C**)

The subset of the Conditions of Registration was selected based on those with a direct relationship to concerns raised by the Reference Group.

2.3 Additional areas of focus

The Reference Group also identified additional areas of focus for the audit, which included:

- arrangements in place where RTOs deliver both qualifications
- simulation of training and/or assessment environment
- sufficient electrical installation experience
- arrangements for the Capstone assessment.

3. Audit methodology

3.1 RTO survey and audit sample

At initiation of the SIA, 27 RTOs were registered to deliver UEE30807 Certificate III in Electrotechnology Electrician and/or MEM30405 Certificate III in Engineering Tradesperson – Electrical/Electronic Trade on the national register, www.training.gov.au, with a WA delivery site. Twenty-four RTOs⁶ responded to the survey to collect data in relation to delivery of the nominated qualifications in WA in 2011, number of enrolments in 2011 and qualifications issued in 2010 and 2011.

The Reference Group agreed that all RTOs that are actively offering or intend to offer one or both of the qualifications in Western Australia were to be included in the site audits, in line with AQTF National Guideline for Risk Management, audit history and resource requirements.

Twelve RTOs were selected for the audit sample on the basis of the criteria agreed to by the Reference Group. All of the RTOs currently delivering or intending to deliver the qualification(s) in WA were registered with the Training Accreditation Council.

- The 12 TAC registered RTOs included

Type of organisation	9 (75%) State Training Provider 3 (25%) private provider
Head office location	7 (58%) metropolitan 5 (42%) regional

- The RTOs selected for audit had the following scope of registration

UEE30807 Certificate III in Electrotechnology Electrician only	6 (50%) RTOs
MEM30405 Certificate III in Engineering Tradesperson – Electrical/Electronic Trade only	1 (8%) RTO
Both qualifications	5 (42%) RTOs

- At the time of the survey, which closed on 27 January 2012, the number of WA learners enrolled in the qualifications and the number of qualifications in the definitive period issued is outlined below

	No. learners currently enrolled in qualification	Qualifications issued	
		Jan-Dec 2010	Jan-Nov 2011
MEM30405	341	126	112
UEE30807	3499	20	41

Note: this data is based on the information provided from the RTOs in the online survey. UEE30807 Certificate III in Electrotechnology Electrician was only approved for delivery in WA, as an apprenticeship, in August 2008; previous students were enrolled in (now) superseded version(s) of this qualification

⁶ 3 RTOs did not respond to the survey – 2 ASQA registered RTOs had the qualifications incorrectly showing as delivery in WA on the national register and one RTO removed WA delivery site during the survey period.

One RTO within the original sample applied to the Council to have its delivery of training for electrical licensing suspended prior to its audit taking place, due to staffing issues. As a result, 11 RTOs were audited during the SIA. The 11 audits took place between 17 April 2012 and 20 June 2012. Two of the audits were conducted at the same time as renewal of registration audits, with separate reports provided for ease of analysis of the audit outcomes.

All 11 audits included the use of a technical advisor to assist the lead auditor. The technical advisors were nominated by the Reference Group and their role was to provide specialist advice on current industry and licensing requirements.

Further details on the audit methodology for this SIA are detailed in **Appendix D**.

4. Audit outcomes

4.1 Key findings

- Eight of the 11 RTOs had been delivering one or both of the qualifications for a substantial period of time.
- One of the eight had recently commenced offering the UEE30807 qualification in 2012 after offering the MEM30405 qualification since the beginning of the registration period.
- Two RTOs had only commenced offering the UEE30807 qualification (only) within the last two years.
- One RTO had not yet commenced delivery at the time of audit as it was pending approval from EnergySafety.

Overall, the audit highlighted variable levels of compliance with the AQTF Essential Conditions and Standards for Continuing Registration.

- 3 (27%) of the RTOs were found to be fully compliant at the time of audit
- 2 (18%) had minor non-compliances
- 5 (46%) had significant non-compliances
- 1 (9%) was found to have critical non-compliances

The categories of non-compliance are defined in the *AQTF 2007 National Guideline for Managing Non-Compliance*, where an extract has been provided at **Attachment 2**.

4.2 Identified strengths

The audits identified areas of good practice at two RTOs. Both RTOs were commended on the availability and continued development of access to training aids and equipment, for the simulated environment. This allows apprentices to explore the use of electricity in a safe and controlled environment.

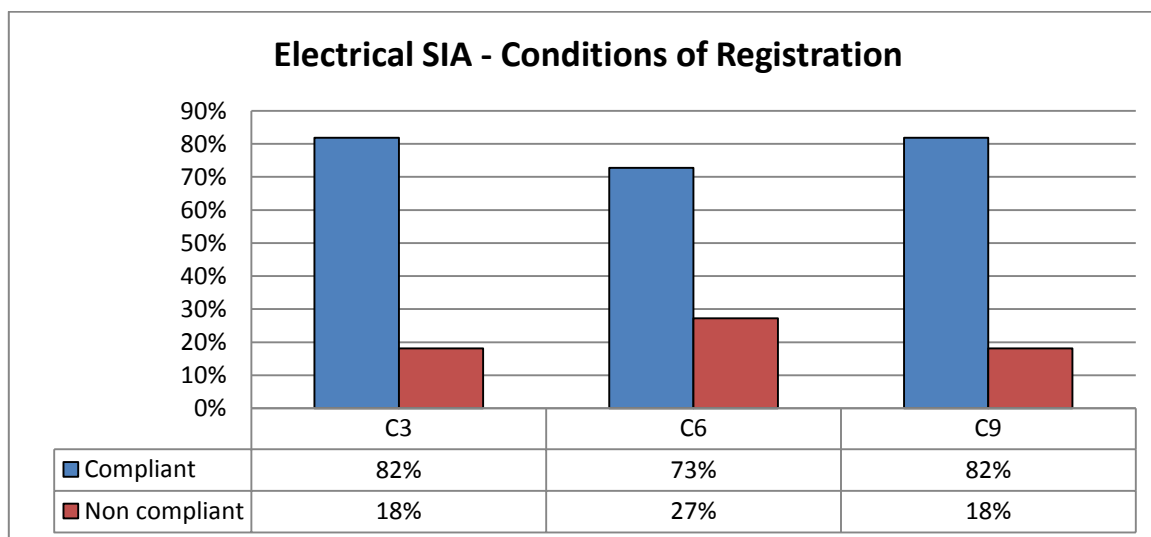
4.3 Compliance with the AQTF Conditions for Continuing Registration

The AQTF Conditions for Continuing Registration selected for audit were:

- *Condition 3 – Compliance with legislation*
- *Condition 6 – Certification & Issuing of Qualifications & Statements of Attainment*
- *Condition 9 – Transition to Training Packages/Expiry of Accredited Courses*

This subset of AQTF Conditions was selected due to the association with concerns raised by the Reference Group.

Graph 1 below reports on RTO compliance against the subset of AQTF Essential Conditions of Continuing Registration audited. There were no additional Conditions with non-compliances identified at audit.



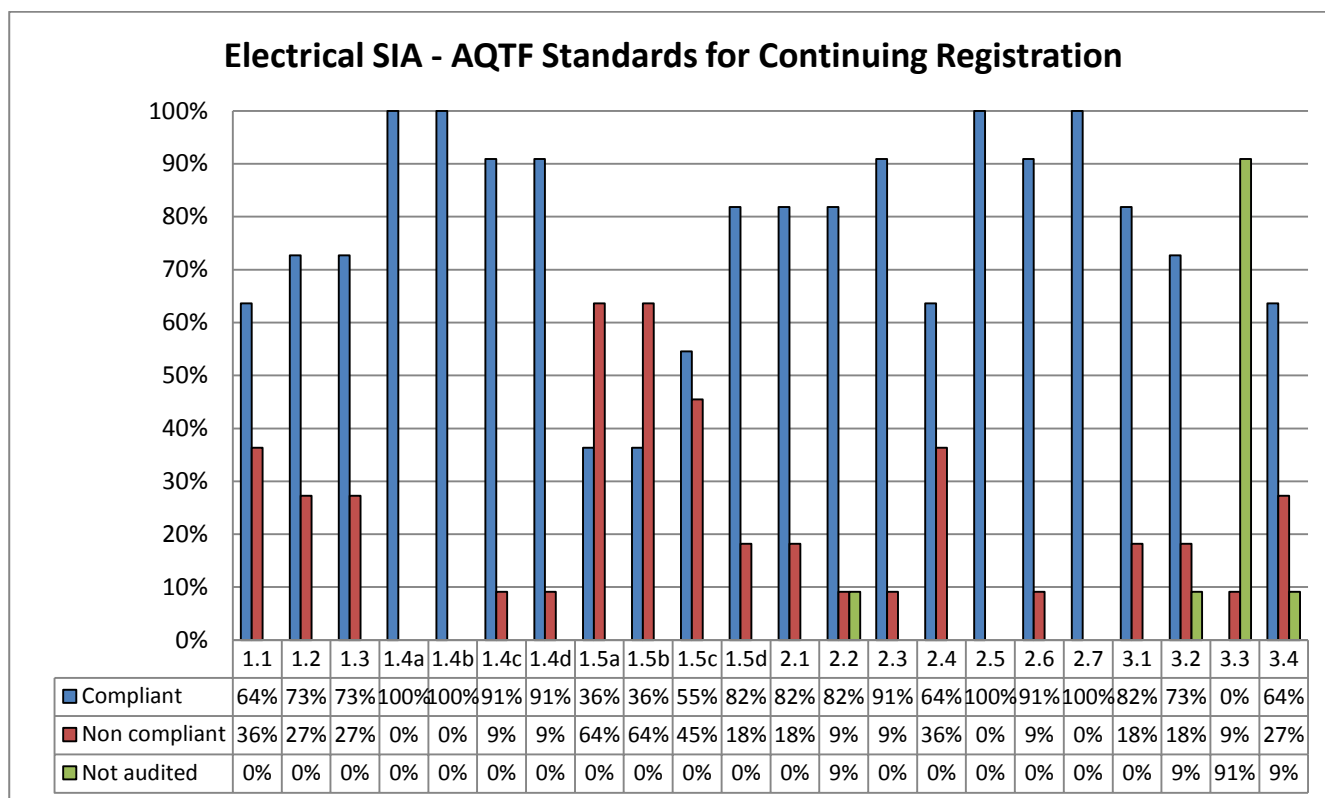
Graph 1: Compliance with AQTF Conditions of Registration

Areas of non-compliance

The areas of non-compliance with these Conditions related to:

- two RTOs (18%) had non-compliances reported with Condition 3 in relation to the requirement within the VET legislation for RTOs to determine an employer’s capacity to train and to confer competence of apprentices in consultation with the employer and one of the two RTOs (9%) was not complying with its Funding Agreement with the Department of Training and Workforce Development (DTWD), by utilising a sub-contracting arrangement
- three RTOs (27%) were found non-compliant with Condition 6 as the Statement of Attainment document did not comply with the Australian Qualification Framework (AQF) requirements
- one RTO (9%) had used a superseded unit for the Capstone Assessment for qualifications issued in 2012, hence the non-compliance against Condition 9 and another RTO was found non-compliant with this Condition as it was not clear during the audit how the RTO would transition to the new UEE qualification.

4.4 Compliance with the AQTF Standards for Continuing Registration



Graph 2: RTO compliance by AQTF Standards (11 RTOs)

Graph 2 above reports on RTO compliance with AQTF Standards for Continuing Registration.

The audit found high levels of compliance (80-100%) with the following Standards:

- **Standard 1.4a** – Training and assessment is delivered by trainers and assessors who have the necessary training and assessment competencies as determined by the National Quality Council or its successors
- **Standard 1.4b** – Training and assessment is delivered by trainers and assessors who have the relevant vocational competencies at least to the level being delivered or assessed
- **Standard 1.4c** – Training and assessment is delivered by trainers and assessors who can demonstrate current industry skills directly relevant to the training/assessment being undertaken
- **Standard 1.4d** – Training and assessment is delivered by trainers and assessors who continue to develop their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence
- **Standard 1.5d** – Assessment including Recognition of Prior Learning (RPL) is systematically validated
- **Standard 2.1** – The RTO establishes the needs of clients, and delivers services to meet these needs
- **Standard 2.2** – The RTO continuously improves client services by collecting, analysing and acting on relevant data

- **Standard 2.3** – *Before clients enrol or enter into an agreement, the RTO informs them about the training, assessment and support services to be provided, and about their rights and obligations*
- **Standard 2.5** – *Learners receive training, assessment and support services that meet their individual needs*
- **Standard 2.6** – *Learners have timely access to current and accurate records of their participation and progress*
- **Standard 2.7** – *The RTO provides appropriate mechanisms and services for learners to have complaints and appeals addressed efficiently and effectively*
- **Standard 3.1** – *The RTO's management of its operations ensures clients receive the services detailed in their agreement with the RTO*

It was reported that 10 (91%) of RTOs were not audited for **Standard 3.3** – *The RTO monitors training and/or assessment services provided on its behalf to ensure that it complies with all aspects of the AQTF Essential Conditions and Standards for Continuing Registration*. This indicates that the conduct of the qualification(s), for the majority, are delivered and assessed using the RTO's own staff, and not through partnership or sub-contracting arrangements. The measures in place for the one RTO that did have partnership arrangements did not comply with Standard 3.3 and was reported as a non-compliance.

Areas of non-compliance

Eight (73%) of RTOs in the audit sample were found to have non-compliances against the *AQTF Standards for Continuing Registration*. Two (18%) had minor non-compliances; five (45%) had significant non-compliances and one (9%) had critical non-compliances. In the situation where the RTO is offering both qualifications, the same audit outcome was reported across both qualifications and therefore has not been reported separately.

The highest levels of overall non-compliance were in relation to:

- **Standard 1.5a** - *Assessment including Recognition of Prior Learning (RPL) meets the requirements of the relevant Training Package or accredited course* – 7 RTOs (64%) were non-compliant
- **Standard 1.5b** - *Assessment including Recognition of Prior Learning (RPL) is conducted in accordance with the principles of assessment and the rules of evidence* – 7 RTOs (64%) were non-compliant
- **Standard 1.5c** - *Assessment including Recognition of Prior Learning (RPL) meets workplace and, where relevant, regulatory requirements* – 5 RTOs (45%) were non-compliant
- **Standard 2.4** – *Employers and other parties who contribute to each learner's training and assessment are engaged in the development, delivery and monitoring of training and assessment* – 4 RTOs (36%) were non-compliant.

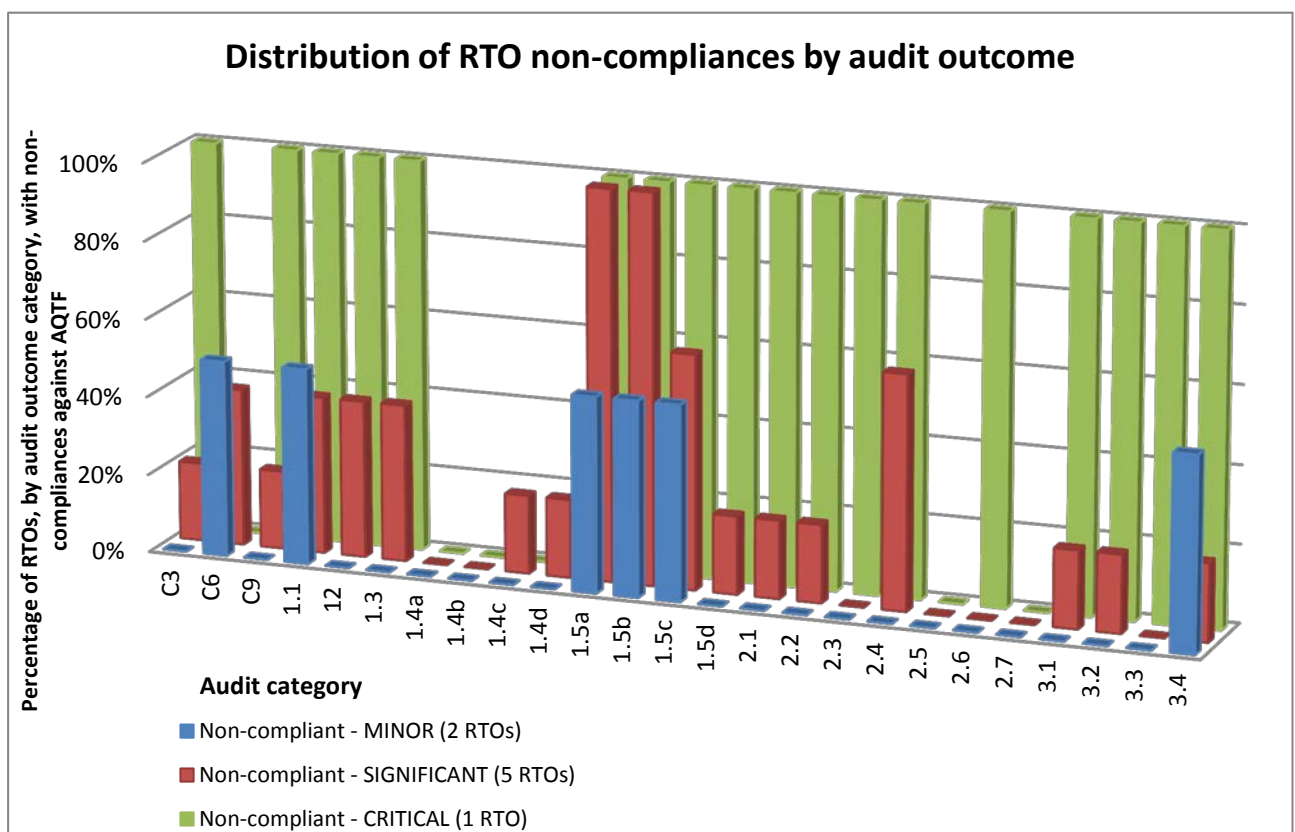
Seven of the 11 RTOs were found non-compliant against Standard 1.5a and Standard 1.5b. One RTO was found to be critically non-compliant against these Standards and five RTOs were significantly non-compliant. Five of these seven RTOs were also non-compliant against Standard 1.5c, with one RTO being critically non-complaint and three were found to be significantly non-compliant.

A rating of significantly non-compliant indicates that the RTO's non-compliances are likely to have a significant adverse impact on learners and/or other consumers of goods and services produced in the training environment or the current (or future) workforce.

Given that for the five RTOs that were significantly non-compliant, these non-compliances were related to assessment of competency which suggests that training and assessment systems are not sufficiently focused on quality training and assessment outcomes. This raised concerns about whether learners are actually achieving competency to the level specified by the qualification.

One RTO was deemed to be critically non-compliant which means that that training and assessment systems are not achieving quality training and assessment outcomes. This adds to the concern raised above and leads to the conclusion that competencies were not being achieved to the level specified by the qualification.

Graph 3 below illustrates the non-compliances found, by proportion of RTOs for each non-compliance category. It illustrates that the non-compliances identified against Standard 1.5a and Standard 1.5b are consistent across all categories of non-compliance.



Graph 3: Distribution of non-compliances identified at audit by RTO audit outcome – minor, significant or critical non-compliance

Description of non-compliances

The following is a synopsis of comments in the audit reports relating to the above areas of non-compliance. Whilst there was some variation in auditor comments there were consistent trends across the majority of RTOs with the majority having a relationship to the assessment process.

Assessment (Elements 1.5a, 1.5b, and 1.5c)

Assessment Strategies

There was insufficient evidence of consultation with industry to ensure the assessments are meeting the requirement of the workplace.

Assessment Instruments/tools

For most of the RTOs with non-compliances in this area, evidence was not provided to demonstrate that the various assessment instruments and tools used gathered sufficient evidence to meet the requirements of the qualification(s) and Training Package(s). This included four RTOs that used electronic recording systems. In some instances assessment instruments focussed on essential knowledge and skills and did not take into account the full scope of the requirements of the units of competency and, in other cases, assessment instruments for old or superseded units of competency were used.

Once again, most non-compliances against this element related to assessment tools not demonstrating that they met the Rules of Evidence for: validity, sufficiency, reliability and currency. For example, some RTOs used knowledge based tests with percentage pass marks, however it could not be identified which 70% or 75% reflected the required knowledge specified in the training package and in other cases written assessments exceeded the requirements of the performance criteria for the unit.

On the Job Assessment

In a number of the audits it was reported that there was no evidence to support the collection of reliable and valid workplace evidence that had a direct relationship to the competency requirements.

The audits also reported that, where evidence of workplace competence was collected, in some instances, there was no verification of the validity of employer's sign off. In a number of reports it was noted that there was no evidence that employer's capacity to train had been assessed. There was a lack of information about guidance employers or apprentices receive for the submission and approval of the relevant on the job activities, to support assessment decisions.

Recording of Assessment

In some instances records indicated that students had been recorded as competent however the evidence was not available on the student's files; the assessment instruments had not been filled in, completed or signed off by the assessor.

Electronic reporting systems did not demonstrate how sufficient evidence is collected and recorded to meet the requirements of the qualification(s) and training package(s) or with the rules or evidence and principles of assessment.

Recognition of Prior Learning (RPL)

In two reports it was noted that the RPL process didn't provide clear guidance to applicants and assessors on the process. Nor did it require the provision of evidence to meet the principles of assessment or verification that training package requirements had been met.

Engagement of Employers (Standard 2.4)

Four RTOs were non-compliant with this standard. The audit outcome for these providers related to no evidence of how employers were engaged with, or made a contribution to, the learners training and assessment. This included employer involvement in the monitoring of apprentices workplace development of competence.

Student interviews

Student interviews were conducted as part of the AQTF audits. A snapshot of the feedback gathered from the student interviews showed:

- some positive feedback was provided, in terms of the training and assessment the students were receiving; the knowledge and experience of the trainers and assessors; students had clear understanding of the assessment requirement on and off the job and they had been made aware of their rights and responsibilities
- negative feedback was received from students about the on the job log book in terms of it being repetitive, badly designed and not helpful
- one group of students indicated their RTO was disorganised; they did not know which units of competency they were doing; they learned more at work and they hadn't had any assessors come to their workplace.

Employer interviews (at audit)

A sample of employers was interviewed by auditors as part of the standard AQTF audit practice. The general feedback was that employers expressed support for the RTO and that the training and assessment met their needs. There were comments received where employers were not happy about training record books and lack of information provided through the record books.

It was reported at one RTO that the employer does not play a significant role in the training and assessment. In this case, assessment in the workplace is limited to the requirement for recording the apprentices work activities, against the number of times certain tasks are completed in the workplace, before they are allowed to sit the Capstone Assessment (collection of logbook tick off and date/sign)

4.5 Additional audit findings

The Reference Group requested that the strategic audit enquire into additional aspects of the training as outlined in section 2.3. The audit findings for these specific aspects are provided below.

Arrangements in place where RTOs deliver both qualifications

Three RTOs currently have apprentices in both qualifications. In all instances, the RTOs have separate strategies and classes and in one instance, an RTO offers the qualifications at different sites.

There was no evidence to show that apprentices from the different qualifications are being trained together.

Simulation of training and/or assessment environment

The RTOs audited provided a range of simulated environments for the apprentices, to support the on the job component. A number of the simulated environments were described as follows:

- *large simulated industrial electrical installation work facility and simulated electrical (domestic) installation testing and fault finding identification units. Recently purchased resources to enable access to contemporary electrical installation test equipment. Facilities to provide relevant practical training and assessment projects for domestic and non-domestic installations*
- *has facilities for a range of simulated electrical installation training and assessment adequate for providing flexibility for domestic and non-domestic installations and a process to have a sufficiently large number of simulated electrical (domestic) installation testing and fault identification units under way*
- *the simulated facilities resources and equipment were also reviewed by the technical expert who reported they were of a high quality*
- *the RTO has developed excellent resources for simulation, ranging from working booths to a complex simulation of a house, and works to validate these with workplaces*
- *simulated training options are available to support any shortfalls in an employer's capacity to provide the scope of skills and experience required. Simulation is intended to 'top up' skills only and not as a replacement for real experience obtained 'on-the-job*
- *have well equipped practical training environments and have a range of simulated activities (as relevant to real work activities) that students complete – including working on 'live' electrical activities.*

There was one scenario where the RTO could provide simulated training and assessment however it faced some constraints relating to the facilities and equipment being utilised, which was reported as a non-compliance.

In the case of the RTO utilising a partnership arrangement for the training, this arrangement extended to the partner organisation advising it would provide all equipment and resources to the RTO, however, as this was not verified, it was deemed to be non-compliant. This particular RTO was reported as undertaking work to provide the facilities and resources to enable an industry reflective simulated training and assessment environment, however there was no evidence to indicate one was in place at time of audit.

Sufficient electrical installation experience

Apprentice electricians are required to have comprehensive electrical installation experience prior to undertaking the Capstone Assessment. The majority of RTOs audited go through a process at the beginning of the apprenticeship cycle (prior to enrolment) to verify if the appointed employer has the capacity to train and offer the full breadth of training experiences required. If not, secondments are arranged, either by the RTO or the employer finding another employer to host the apprentice. In the case of one RTO, if there are gaps identified and the employer cannot provide an arrangement with a sub-contractor or another employer, to provide the additional workplace experience, the apprentice is not accepted.

Some RTOs ensure the employer agrees to release the student to another employer to gain the practical experience or the RTO provides supplementary training and assessment to address the shortfall.

In two cases the RTOs were not able to provide evidence of any process to confirm, review or monitor the individual student's on the job exposure to electrical installation experience. In one situation, it was particularly evident when the apprentices were in regional and remote locations. This resulted in non-compliances being reported.

The audit process identified several methodologies which RTOs use to assess whether apprentices have had sufficient electrical installation experience. These included training record books; log books; electronic tracking systems and employer sign off.

Arrangements for the Capstone assessment

Four of the 11 RTOs audited had not yet delivered the Capstone Assessment, due to the recency of the UEE30807 Certificate III in Electrotechnology Electrician qualification for these RTOs. One RTO had not commenced training in the qualification at the time of the audit because approval from EnergySafety was pending.

Where RTOs have determined the Capstone Assessment is an integral part of the qualification, they use the available assessment tools as assessment for the unit of competency. Some of these tools have a 75% pass judgement on the essential knowledge of the units of competency in a competency based process, which compromises the validity and reliability of the assessment. This practice needs to be revised for assessments against units of competency.

Prior to the SIA, anecdotal evidence had been received to indicate apprentices who fail the Capstone are being retrained specifically to pass. There was no evidence uncovered during the audit process of students who do not pass the Capstone assessment receive additional training in the morning and resitting the test (the components they did not originally pass) in the afternoon.

Based on the information reported, there was a range of support provided to apprentices who have not passed the Capstone Assessment. Apprentices are offered additional theory revision and practical training. There was a range of time allowed between the assessment and reassessment – 30 hours; minimum one week; two weeks (proposed).

4.6 Employer survey

An employer survey of training of electrical apprentices in WA was developed and conducted to seek feedback on employer satisfaction with the training provided to electrical apprentices. The survey sought information on:

- how satisfied employers are with the way the [electrical apprenticeship] training is offered and the experience the apprentices receive
- how much contact the employer has with the RTO and if the employer is required to verify the on the job assessment evidence
- employer opinion on the ability of recently graduated apprentices to meet industry requirements
- employer confidence in the Capstone Assessment as an indicator that a person should get their electrical licence
- general comments on the experience or perceptions as employers of licensed staff/contractors.

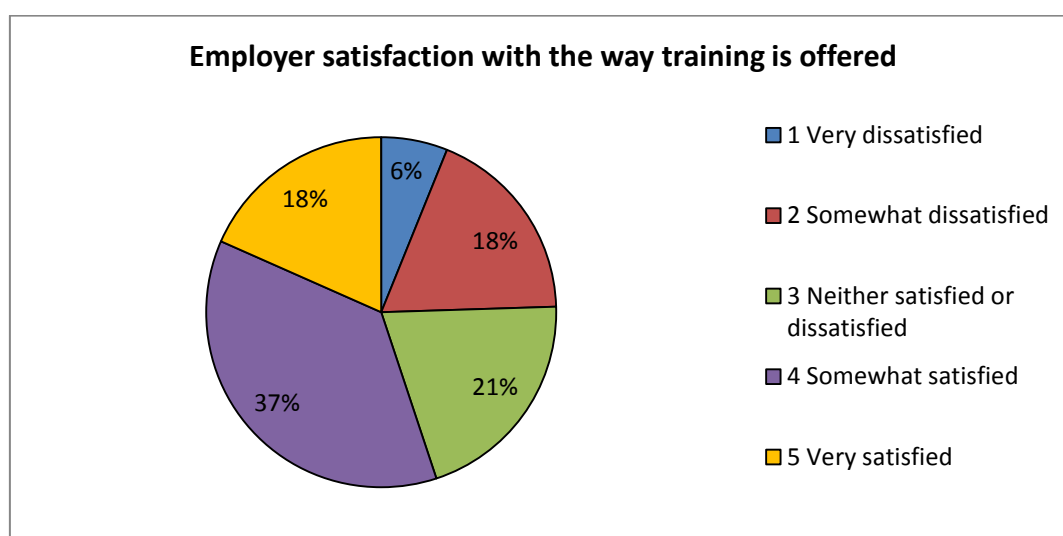
The survey was administered online, with the invitation to participate emailed to employers with current indentured Electrical Mechanic and Engineering Tradesperson (Electrical) apprentices⁷. The Reference Group members also assisted with the distribution and promotion of the survey to their interested stakeholders. A copy of the survey is at **Attachment 3**.

Survey response

101 responses from employers were received in response to the survey. Key results are outlined below, with more comprehensive details provided in **Appendix E**.

An analysis of responses to the survey questions was conducted and is summarised below.

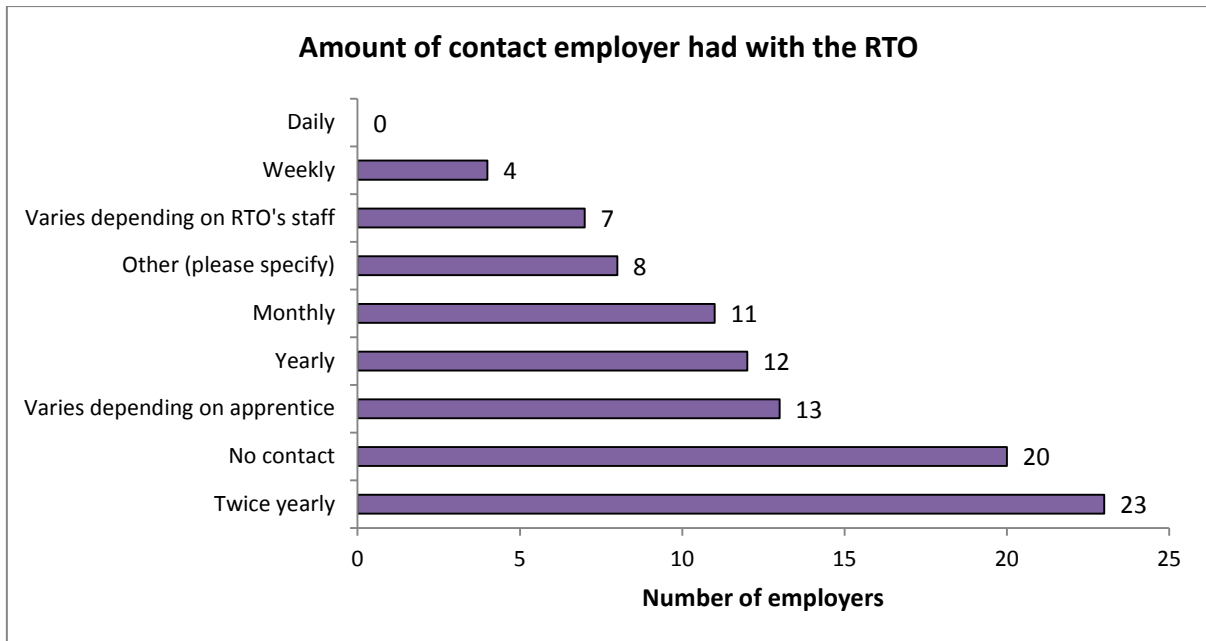
- 37% of respondents indicated they were “somewhat satisfied” with the way training is offered; 18% indicated they were “somewhat dissatisfied”, as outlined in **graph 4** below



Graph 4: Employer satisfaction with the way electrical apprenticeship training is offered

⁷ The invitation to participate in the employer survey was sent to contact email addresses as provided by ApprentiCentre, DTWD as at 25 June 2012.

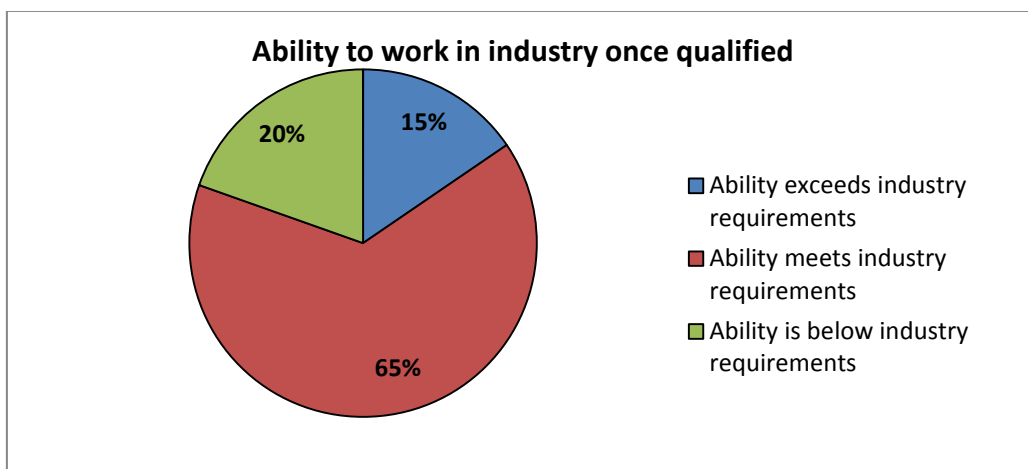
- **Graph 5** (below) demonstrates the amount of contact employers reported as having with a representative of the RTO. 23% of respondents indicated they had contact with the RTO twice yearly; 20% selected that they no contact with the RTO



Graph 5: Amount of contact employers have with the RTO

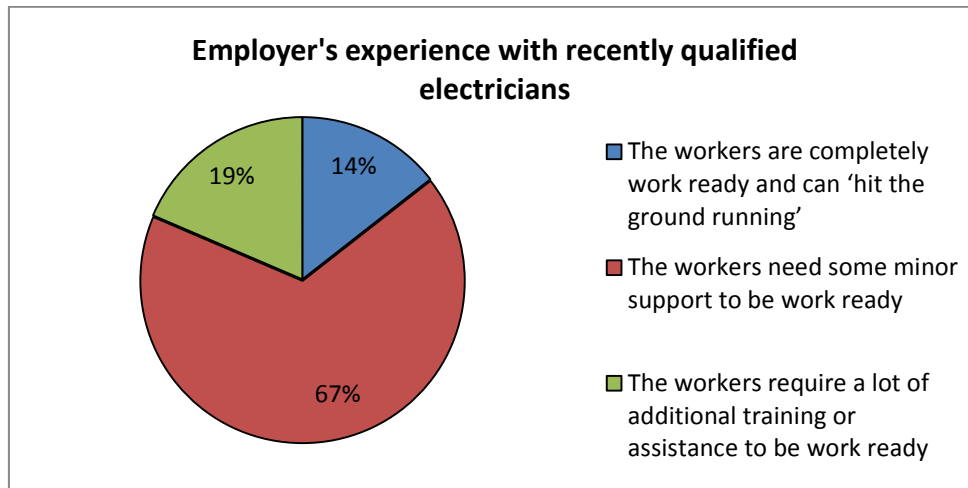
Comments following the 'Other' option include "all contact initiated by myself", "minimal contact, would prefer phone or email say quarterly on progress", "only email to inform of block training dates", "twice yearly from one RTO but no contact from the others", "very rarely. It is usually me contacting them to find out what is going on".

- Just over 70% of the employers with current apprentices indicated that the RTO requested that the employer verify the evidence of apprentice work that it used towards their assessment
- 80% of respondents indicated that the ability of new graduates meets or exceeds industry requirements (to understand the requirements of their role and work effectively in industry), as represented in **Graph 6**



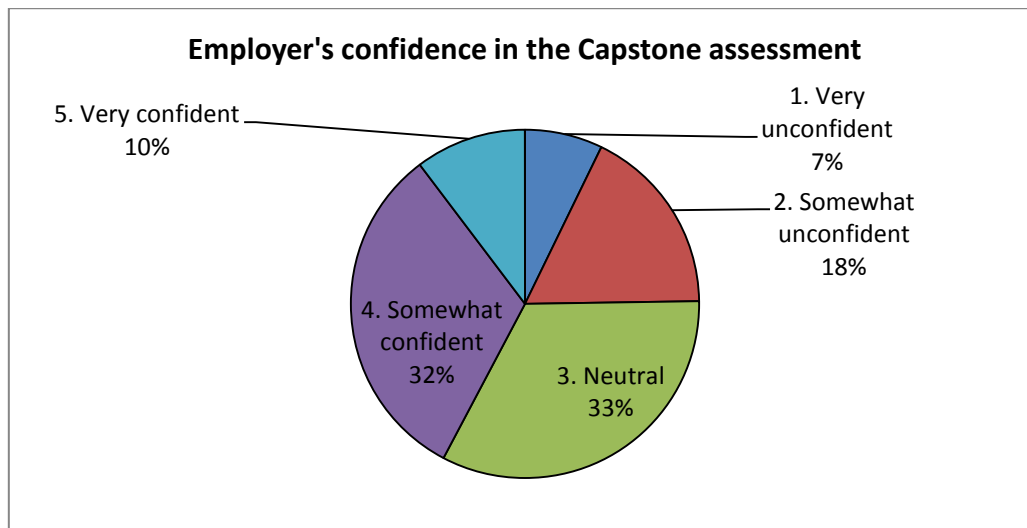
Graph 6: Employer response to the ability of new graduates to meet industry requirements

- When asked if employers believe if apprentices are receiving the full range of training experiences they need during their apprenticeship, to prepare them to work in the industry, 57% of respondents said yes, while 43% indicated no
- **Graph 7** depicts the experience employers have with recently qualified electricians. 67% of respondents selected a statement “*that workers need some minor support to be work ready*” which best described their experience with workers who had recently finished their apprenticeship, passed the Capstone Assessment and have their licence



Graph 7: Representation of employers experiences with recently qualified electricians

- Employers were asked to indicate their confidence in Capstone test as a good indicator that a person should get their electrical licence. **Graph 8** represents the responses received. 32% rated being “somewhat confident” with the Capstone test being a good indicator that a person should get their electrical licence; 10% are “very confident” and 7% selected that they were “very unconfident”



Graph 8: Employer confidence in the Capstone assessment

Additional comments in the survey

Responses received from employers in relation to the **Qualifications or Training Packages** indicated a preference for one Training Package to service the electrical industry area; with a selection of different pathways; with two licenses for Fitters and Installers clearly outlined in one Training

Package and a with a clear distinction between the domestic and industrial electrical trades. Comments were also made that apprentices who have completed the qualification have theoretical understandings but no real workplace experience.

Comments in relation to the **Electrical Licence** stated that there was too much emphasis placed on the Capstone test, it is weighted in favour of the domestic electrical industry and the application and approval process, for apprentices to receive their license, is very slow. It was suggested that developing an individual licence for fitters and installers would ease the confusion in the electrical industry area.

The comments in relation to **Registered Training Organisations (RTOs)** related to perceived shortage of qualified trainers and assessors and a lack the quality of training and assessment services being delivered. Also, comments were made that indicated that RTOs need to have more contact and involvement with employers. RTOs are signing off apprentices as competent, when employers are not confident about the apprentices' abilities. Some employers do not feel that they are able to voice their concerns with the RTO.

Employers comments about the **Training System** itself focussed on training and assessment needing to be more closely aligned with, and relevant to, industry needs and that there are no skill gaps created by work placement.

Other **General Comments** by employers suggested that the training and assessment received by apprentices receive at RTOs appears to be out of date and not conforming to regulations and guidelines. Apprentices also have knowledge and skill gaps and struggle to answer general questions.

When asked about **suggestions and improvements** related to electrical training in WA employers made the following comments:

- involve industry and EnergySafety when developing Training Packages
- RTOs should review the skills that apprentices use daily, at the workshop and provide further training for skill gaps
- a line of communication between the RTO and the employer needs to be established
- a clear distinction between the domestic and industrial electrical trades needs to be established.

Overall, employers have recognised the good practice that has been implemented by RTOs and industry in the electrical industry area. However concerns have been raised regarding the quality of training and assessment being provided to apprentices. Employers indicated that training and assessment received at RTOs appears to be out of date and not conforming to industry regulations and guidelines.

Employers commented that some apprentices appear to have skill and knowledge gaps and struggle to answer general questions. Employers have acknowledged that this is possibly due to the shortage of qualified trainers and assessors available which has also been outlined as an issue. It was suggested that RTOs and employers should work closer together to assess the individual apprentices to address any skill gaps through additional training or work placement.

Additional information and specific quotes from the respondents are included in **Appendix E**.

5. Post audit follow up

In order to maintain registration RTOs must be fully compliant with the *AQTF Essential Conditions and Standards for Continuing Registration*. The Council's processes provide RTOs found non-compliant at audit an opportunity to rectify these non-compliances within 20 working days.

Where non-compliance remains after the rectification period, the matter is referred to the Council for further consideration and action. This action may include sanctions such as suspension and cancellation.

The two RTOs that had minor non-compliances were able to demonstrate compliance after the rectification period.

Of the five RTOs that were significantly non-compliant at audit, four demonstrated compliance after review of the additional evidence. One of these RTOs still had significant non-compliances remaining after the rectification period, and has subsequently addressed all outstanding issues.

The RTO with critical non-compliances did not address the non-compliances within the rectification period. The remaining non-compliances were categorised as significant. This matter was referred to the Council for further action.

As mentioned in the determination of the audit sample one RTO requested a voluntary suspension of the qualification which leads to the electrical licence. The Council granted this suspension for a six month period, on the condition that an audit of this qualification is conducted prior to the lifting of the suspension.

New qualification – UEE30811 Certificate III in Electrotechnology Electrician

During the SIA process the UEE30807 Certificate III in Electrotechnology Electrician was replaced by UEE30811 Certificate III in Electrotechnology Electrician and approved as an apprenticeship in WA. At this time, four RTOs have added the new qualification to the scope of registration.

Three of these RTOs participated in the SIA. Two were compliant at audit of UEE30807 Certificate III in Electrotechnology Electrician, and the third rectified the non-compliances identified at audit.

The fourth RTO applied to add this (trade) qualification on for the first time, to meet a significant demand in that region. This RTO was audited for UEE30811 Certificate III in Electrotechnology Electrician and demonstrated compliance with the AQTF Essential Conditions and Standards. A technical advisor accompanied the audit on this site visit, and was able to comment on the RTO's capacity. It is noted that EnergySafety would conduct a further inspection of the RTO's facilities prior to the RTO gaining approval through the licensing body.

6. Conclusion

6.1 Compliance with AQTF

The audit found that three of the 11 RTOs were fully compliant with the *AQTF Essential Conditions and Standards for Continuing Registration*, two had minor non-compliances, five had significant non-compliances identified at audit and one RTO was found to be critically non-compliant.

An analysis of the non-compliances identified that the highest levels of non-compliance were related to Assessment, in particular **Standards 1.5a, 1.5b and 1.5c**. The other area of non-compliance which featured amongst RTOs with significant levels of non-compliance was **Standard 2.4**, which covers the contribution of employers and other parties to the learning process.

6.2 Key issues identified through the audits

The following key issues impacting on training and assessment outcomes identified in the SIA relate to the following areas.

Assessment

As stated above, the highest levels of non-compliance in the SIA were in relation to assessment. The main reasons for this includes assessment not meeting training package requirements and lack of evidence that assessments as judged by the instruments and tools were gathering appropriate and sufficient evidence to assess competence. This cluster of non-compliances is clearly evident in Graph 3 (p 17) and represents a systemic issue with the RTOs audited.

Some employers also expressed concerns about the quality of training and assessment being provided to apprentices and indicated that training and assessment received at RTOs appears to be out of date and not conforming to industry regulations and guidelines.

Integration of institution based and on the job training

The audits found a lack of connection between what the apprentice was doing in the workplace and the assessment of competence. Also there was a lack of evidence of processes to monitor individual apprentices on the job, to provide adequate support for supervisors on the job, or to ascertain the contribution played by employers to each learners training and assessment which is a requirement of the AQTF.

The above issues were confirmed by the employer survey with comments such as:

“RTOs signing off apprentices as competent when employers are not confident of the apprentice’s ability”

“RTOs need more contact with employers”

There were also comments made in the audit reports and by students about the inadequacy of the on the job log books.

Capstone

The Capstone Assessment is theoretically not part of an AQF qualification and therefore would not normally be included in an AQTF audit. However, given the importance of the Capstone Assessment to licensing requirements and its integration within the qualifications being audited, it was decided to request auditors to comment on RTOs arrangements for the Capstone Assessment.

The actual AQTF audits raised few issues about the conduct of the assessment for the Capstone Assessment, except to point out that the use of a percentage mark for assessment was inconsistent with competency based training. However, the SIA process, which included the Reference Group meetings, did highlight a lack of clarity about the Capstone Assessment and the requirements to be granted an Electricians Licence. In particular, it is not clear that there is a common understanding of the link between the Capstone Assessment and the unit of competency for UEE apprentices *UEENEG005B Verify compliance and functionality of general electrical installations* or where the assessment fits for the MEM apprentices. There was also some lack of clarity concerning the requirements to map the electrical installation experience required by apprentices who had done the Engineering Tradesperson (Electrical) stream, prior to them being able to undertake the test.

6.3 Discussion

6.3.1 Assessment

This SIA was initiated in response to concerns by industry about the quality of the nationally recognised training being delivered by RTOs in WA. The findings of the SIA confirm that just over 50% of the RTOs audited had significant or critical non-compliances related to assessment of competency identified at audit.

This suggests that training and assessment systems are not sufficiently focused on quality training and assessment outcomes and also raises concerns about whether the learners are actually achieving competency to the level specified by the qualification. The findings of the SIA support the concerns raised by industry.

The quality of training and rigour of assessment of apprentices in this industry area is crucial, given the high risk of working with electricity, both to the future electrician, their company, the industry and the public. It is therefore reasonable to conclude that RTOs need to focus on ensuring that all assessment activities are mapped to the requirements of Training Packages and that assessments meet the principles of assessment. Without these elements of the AQTF being met, it is not possible to conclude that the requirements of the units of competency, as specified in the training package, are being achieved by all apprentices. Targeted professional development activities for this sector could assist in the development of the required skills to improve assessment activity.

6.3.2 Integration of institution based and on the job training

Two-thirds of the employers who responded to the survey indicated that recently licensed electricians still “need some minor support to be work ready” and 43% of the employers did not consider that apprentices receive the full range of training experiences they needed during their apprenticeship, to prepare them to work in the industry. This indicates a perception of deficiency with the training for these apprenticeship areas.

This issue also relates to the key finding that there appears to be a lack of connection between what the apprentice is doing in the workplace and the assessment of competence. Employers reported that they were not adequately informed about, or engaged with, the apprentices’ off the job training and assessment.

The requirement for a log book, in which experiences gained in the workplace are verified by employers or supervisors, is not mandated by the funding body in WA or by a requirement of the training packages that lead to qualifications in this area. Under the current Apprenticeship Policy⁸ of the WA Department of Training and Workforce Development (DTWD), there is a requirement for the

⁸ Department of Training and Workforce Development, Apprenticeship Policy, 1 February 2012, version 1.1

training provider to determine that the employer who is party to a training contract has the capacity to train. This implies that there is an expectation that aspects of competencies will be undertaken in the workplace.

It is also the RTO's responsibility to verify that the apprentice has appropriate experience in the workplace, and in particular, sufficient electrical installation experience, either within or on top of the qualification, prior to sitting the Capstone Assessment. While the majority of RTOs audited had methods in place to review the employers' potential capacity to train and support training at the beginning of the apprenticeship, it does not appear that this tracking continues for individual apprentices throughout the apprenticeship. It is imperative that the capacity for apprentices to be exposed to the required breadth of installation experience is monitored throughout the apprenticeship.

Therefore it is important that employers are aware of their responsibilities and that RTOs have a systematic methodology for gathering workplace evidence that is verifiable, authentic, reliable and auditable. The process should consider developing or refining existing models so that the final record of evidence can suit multiple purposes. All stakeholders with a vested interest in the evidence of workplace experience should be engaged in this process.

Whichever method is employed by RTOs, it should suit the dual purpose of contributing towards assessment evidence of the AQF qualification, as well as licensing. It would also appear that it could suit a third purpose as an effective communication tool between the RTO and the employer. If this is endorsed, RTOs would need to further develop the method(s) and model(s) used to gather workplace evidence that is verifiable, authentic and reliable.

6.3.3 Licensing – Capstone Assessment

There appears to be confusion about the Capstone Assessment and whether it is a stand-alone component or whether it is within the AQF qualification. The confusion seems to be related to the link between the requirements for the actual Capstone Assessment including workplace experience and the qualification itself. The DTWD provides funding for an additional 20 nominal hours for the Capstone assessment for the MEM qualification, which implies it is within the training; however it is not part of the qualification training package requirements. The DTWD conversely funds the Capstone Assessment within an existing unit of competence for UEE apprentices. For the UEE qualification, the Capstone Assessment is considered to be the assessment for a specific unit of competency, *UEENEEG005B Verify compliance and functionality of general electrical installations*⁹, which has a significant pre-requisite requirement.

The Capstone Assessment, as a final safety assessment for licensing purposes, is not within the Council's jurisdiction. However, it does fall within the jurisdiction of EnergySafety, as the licensing authority. Therefore the Council and EnergySafety must continue to work together to ensure quality outcomes for all apprentices seeking to gain the electricians licence.

6.3.4 National Licensing

It is recognised that the Australian Vocational Training System is working towards the National Licensing System for Specified Occupations which includes electrical licensing. The following recommendations are made in relation to the quality of training in this area and are appropriate to any licensing regime that is in place to assure the safety of electrical installations.

⁹ *UEENEEG005B Verify compliance and functionality of general electrical installations* – this unit covers inspection and testing to verify whether an electrical installation is safe and compliance with all requirements. It encompasses working safely, visual inspections and mandatory, optional and functional test procedures, identifying non-compliance defects and mandatory reporting requirements. (Unit descriptor)

6.4 Recommendations

The following recommendations are proposed to address the key findings of the SIA.

Recommendation: Ongoing compliance

- 1) The Training Accreditation Council ensures that RTOs audited for the current or revised Certificate III qualifications which lead to an electrician's licence, including all new applications, be subject to a site audit, with technical advisors in attendance where possible.
- 2) The Training Accreditation Council to undertake monitoring audits of all RTOs that were found to have significant or critical non-compliances within 12 months.

Recommendation: Assessment

- 3) The Training Accreditation Council will liaise with the relevant government departments and other stakeholders to facilitate professional development activities for this sector with a focus on improving assessment skills.

Recommendation: Integration of institution based and on the job training

- 1) The Training Accreditation Council to request the Electrical, Utilities and Public Administration Training Council and Engineering and Automotive Training Council to coordinate, for their respective industry areas, the development of a good practice model for gathering, verifying and validating workplace evidence.

Recommendation: Quality Assurance of the Electricians Licence process in Western Australia

- 4) The Training Accreditation Council and EnergySafety, as the electrical licensing authority, develop formal arrangements to ensure that the Council is fully aware of current licensing requirements and that EnergySafety is able to provide technical advisors as required for Australian Quality Training Framework (AQTF) audits.

7. Appendices

Appendix A	Reference Group membership
Appendix B	Overview of the electrical industry
Appendix C	Australian Quality Training Framework Essential Conditions and Standards for Registration (2010) – selected for audit
Appendix D	Audit methodology
Appendix E	Employer survey responses

ATTACHMENTS

Attachment 1	Essential Performance Capability Requirements for Licensed Electricians
Attachment 2	AQTF 207 National Guideline for Managing Non-Compliance (extract of categories of non-compliance)
Attachment 3	Employer survey questionnaire

Appendix A: Reference Group membership

The role of the Reference Group for the Strategic Industry Audit of electrical licensing qualifications in Western Australia is to:

- provide input into the scope and audit approach
- provide technical expertise on the UEE30807 Certificate III in Electrotechnology Electrical and/or MEM30405 Certificate III in Engineering – Electrical/Electronic Trade
- assist with the identification and mitigation of risks
- provide input into the survey for RTOs, employers and students within the industry
- provide advice on communication strategies, including questionnaires and surveys
- assist with the promotion of the strategic industry audit to the wider sector, including employers and students
- provide advice on trends and issues relating to best practice, opportunities for improvement and non-compliances highlighted through the audit process
- provide comment on, and endorse the recommendations of the final report.

Membership

EnergySafety

(Department of Commerce)

Steve Isbister

Coordinator, Licensing Office
Executive Officer, Electrical Licensing Board

Electrical, Utilities and Public Administration Training Council

David Love

Executive Director

Engineering and Automotive Training Council

Brian Chanter

Project Manager

Industry Representative

Gary Livett

Operations Manager
National Electrical and Communications
Association (NECA) – WA Branch
Electrical Group Training

Industry Representative

Murray Daniels

Apprentice Training Officer
Alcoa of Australia Limited

ApprentiCentre

(Department of Training and Workforce
Development)

Steve Elsegood

A/Coordinator

Training Accreditation Council Secretariat

(Department of Education Services)

Janet Matheson

Manager, VET Compliance

Olivia Mayo (Project Manager)
Senior Project Officer

Appendix B: Overview of the electrical industry

Western Australia

Electricity has such a high potential risk associated with its transmission, distribution and use that governments regulate to control the standard of the product and to ensure the safe application of electricity. The risks associated with working with electricity are extremely high so a licensing system is in place to ensure that only competent workers carry out electrical installing work. In Western Australia, the *Electricity (Licensing) Regulations 1991* provide that electrical work may only be carried out by persons with the appropriate electrical licence unless it is a type of work that is exempted by regulation¹⁰.

The occupational licensing of electrical workers is regulated in Western Australia by EnergySafety, through the Department of Commerce. The electrical worker licences are issued by the Electrical Licensing Board.

The Electrical Licensing Board issues licences for the following type of work:

- electrical contracting work – to electrical contractors
- electrical installing work – to electricians and is valid for up to five years
- electrical training – to apprentices and trainees
- restricted electrical work – to restricted electrical workers¹¹.

Data provided by EnergySafety identifies that there has been an increase in the number of all types of current licences in WA over the last five years, shown in **table 1** below

Licence Type	Number 30 June 2008	Number 30 June 2009	Number 30 June 2010	Number 30 June 2011	Number 30 June 2012
Electrician's Licence	21 075	23 003	25 054	27 219	30 384
Electrician's Training Licence (Indentured Apprentices)	3 551	3 529	3 557	3 868	4 059
Pre-Apprentices	436	531	677	587	420
Electrical contractors	3 627	3 906	4 128	4 325	4 397
Restricted	4 130	3 882	3 130	3 338	3 539

Table 1: Overall electrical licences in WA as at 30 June each year. Data courtesy of EnergySafety.

To be granted a licence by EnergySafety, or any other Electrical Licensing regulators in Australia, the apprentice must be able to demonstrate that they can meet a nationally agreed minimum standard. The RTOs that deliver this nationally recognised training must satisfy specified training and assessment requirements so that on completion of their training the apprentice will be able to obtain an electrical licence. These requirements are:

- achievement of 66 specified Essential Performance Capabilities, as prescribed by the National Uniform Electrical Licensing Advisory Council in the "List of Essential Performance Capability Requirements for Licensed Electricians" [see **Attachment 1**]

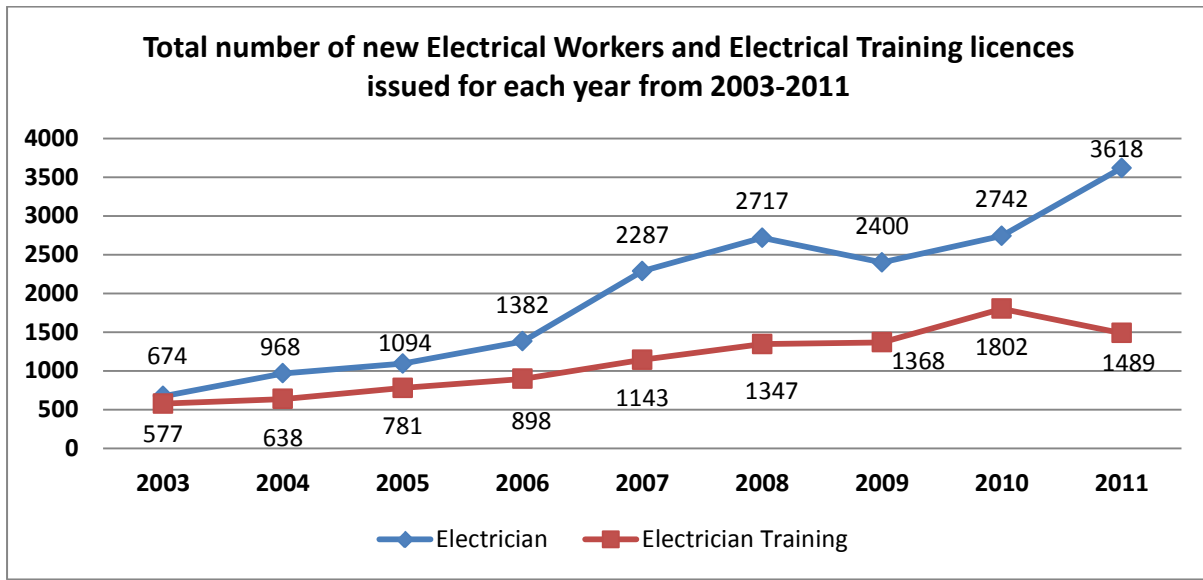
¹⁰ Information from EnergySafety's website, www.commerce.wa.gov.au/EnergySafety

¹¹ the holder of a restricted electrical worker's licence is not permitted to carry out the installation or alternations to fixed wiring or to repair or replace items such as power points, lighting fittings etc

- achievement of a “Capstone Assessment” which tests the apprentices towards the end of training to confirm that they have attained the most critical of the “List of Essential Performance Capability Requirements for Licensed Electricians”. The format of this assessment is a combination of written and practical assessment covering all of the nominated critical items.

RTOs must apply to EnergySafety for approval of its electrician training scheme.

The below graph (**graph 9**) demonstrates the trend between new electrical workers licences issued in comparison with the number of electrical training licences issued in WA.



Graph 9: Total number of new Electrical Workers and Electrical Training licences issued from 2003-2011.
Data courtesy of EnergySafety.

The requirement for qualified electricians is projected to increase over the next five years. Based on the 2012 Occupational Projections¹² released by the Department of Education, Employment and Workplace Relations (DEEWR), there is a 17.1% increase anticipated.

Occupation	Employment level Nov 2011 ('000s)	Employment growth 11-12 to 2016-2017 (% pa)	Employment growth 11-12 to 2016-17 ('000s)	5 year growth to 2016-2017 (%)	Employment level at 2016-2017 ('000's)
Electrician	139.2	3.2	23.8	17.1	162.9
Electronics Trade Workers	37.0	0.8	1.5	4.1	38.5
Electrical Engineers	19.1	2.0	2.0	10.4	21.1
Electrical Engineering Draftspersons, Technicians	9.6	1.2	0.6	6.2	10.1

Table 2: Employment growth data for electrical based occupations⁹

¹² Employment Projections by Industry, Occupation and Regions – Occupational Projections to 2016-2017, (2012) Department of Education, Employment and Workplace Relations (www.dweer.gov.au)

Capstone

There are a number of regulatory requirements candidates must satisfy before an Electrician licence can be issued. In most instances, electrician licences are issued following completion of a nationally recognised training qualification and successfully passing a Capstone Assessment.

The overarching objective is that the training for a prospective electrician must deliver at least the “essential performance capability” requirements, and that the Capstone Assessment will confirm that the most critical of these has been attained by the applicant. The Capstone is a final ‘safety’ assessment covering the 32 critical items of the 66 essential performance capabilities and consists of written and practical components.

The “List of Essential Performance Capability Requirements for Licensed Electricians” [see **attachment 1**], which was endorsed by the national Uniform Electrical Licensing Advisory Council (NUELAC) and subsequently approved for use by the various Licensing Authorities by the Electrical Regulatory Authorities Council (ERAC) has been embedded in national curriculum, since 2001.

The requirements for the Capstone Assessment are also mandated under the same arrangements by NUELAC. The mandated requirements include when the Capstone Assessment can be applied; the content and scope of the overall Capstone Assessment; the format; practical and written components; nominal duration; person supervising the Capstone Assessment and reporting the outcome to the Licensing Authority. There are also requirements stipulated about audits of the RTOs Capstone Assessment delivery by the Licensing Authority (in WA, this is EnergySafety).

The Performance Capabilities are essential and the minimum expected of a licensed electrician across Australia. A person seeking an electrical licence needs to be capable of competently and safely performing the tasks set in a wide variety of typical industry environments, working independently and without supervision. The person also needs to know what action, if taken, will void the integrity, compliance and/or certification of electrical equipment or an electrical installation.

National

In comparison across Australia, as of March 2012, WA had 13% (31,090) of the existing electrical licensees issued nationally (230,707)¹³.

The 2012 Enviroscan released by the EE-Oz Industry Skills Council finds a decreasing number of electrical apprentices graduating (across Australia) in 2013. It also reports that within the energy sector trades the electrical apprenticeship is expected to be seriously impacted, due to an impending skills shortage¹⁴.

A key priority for Manufacturing Skills Australia (MSA) Industry Skills Council in 2012 will be establishing an electrical licensing pathway through the MEM05 Metal and Engineering Training Package qualifications. MSA stakeholders have an important need for licensing recognition and MSA will be developing a specialised Certificate III qualification to meet their requirements¹⁵. The Environmental Scan indicates a skills shortage of electrical tradespersons at base and advanced trades levels and advanced trades, including skill area of HV/DC motor control and industrial electricians.

¹³ National Occupational Licensing Authority, *National Licensing - Consultation Regulation Impact Statement – Proposal for national licensing for electrical occupations* (2012), p ix

¹⁴ Electrocomms and Energyutilities Industry Skills Council, *Enviroscan 2012*, p 13

¹⁵ Manufacturing Skills Australia, *Environmental Scan 2012*, p25

National harmonisation

The Council of Australian Governments (COAG) has agreed to develop a National Occupational Licensing System (national licensing) for certain occupational areas to allow licensees to perform regulated work anywhere in Australia while holding a national licence. Electrical is nominated to be in the first wave of occupations moving to national licensing, and is scheduled to commence in 2013.

This proposed system would replace current arrangements where each state and territory is responsible for the licensing and regulates in differing ways. Western Australia is considering its position on the passage of the legislation to implement national licensing following the consultation period¹⁶.

WA and SA are the only states which currently licence apprentices – this has been highlighted as imposing unnecessary requirements on licence holders¹⁷.

¹⁶ National Occupational Licensing Authority, *National Licensing - Consultation Regulation Impact Statement – Proposal for national licensing for electrical occupations* (2012), p viii

¹⁷ National Occupational Licensing Authority, *National Licensing - Consultation Regulation Impact Statement – Proposal for national licensing for electrical occupations* (2012), p xv

Appendix C: Australian Quality Training Framework Essential Conditions and Standards for Continuing Registration (2010) – selected for audit

Condition 3	Compliance with legislation
Condition 6	Certification & Issuing of Qualifications & Statements of Attainment
Condition 9	Transition to Training Packages/Expiry of Accredited Courses
Standard 1	The RTO provides quality training and assessment across all of its operations
1.1	The RTO collects, analyses and acts on relevant data for continuous improvement of training and assessment.
1.2	Strategies for training and assessment meet the requirements of the relevant Training Package or accredited course and are developed in consultation with industry.
1.3	Staff, facilities, equipment and training and assessment materials used by the RTO are consistent with the requirements of the Training Package or accredited course and the RTO's own training and assessment strategies.
1.4	Training and assessment is delivered by trainers and assessors who: (a) have the necessary training and assessment competencies as determined by the National Quality Council or its successors, and (b) have the relevant vocational competencies at least to the level being delivered or assessed, and (c) can demonstrate current industry skills directly relevant to the training/assessment being undertaken, and (d) continue to develop their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence.
1.5	Assessment including Recognition of Prior Learning (RPL): (a) meets the requirements of the relevant Training Package or accredited course (b) is conducted in accordance with the principles of assessment and the rules of evidence (c) meets workplace and, where relevant, regulatory requirements (d) is systematically validated.
Standard 2	The RTO adheres to principles of access and equity and maximises outcomes for its clients.
2.1	The RTO establishes the needs of clients, and delivers services to meet these needs.
2.2	The RTO continuously improves client services by collecting, analysing and acting on relevant data.
2.3	Before clients enrol or enter into an agreement, the RTO informs them about the training, assessment and support services to be provided, and about their rights and obligations.
2.4	Employers and other parties who contribute to each learner's training and assessment are engaged in the development, delivery and monitoring of training and assessment.
2.5	Learners receive training, assessment and support services that meet their individual needs.
2.6	Learners have timely access to current and accurate records of their participation and progress.
2.7	The RTO provides appropriate mechanisms and services for learners to have complaints and appeals addressed efficiently and effectively.
Standard 3	Management systems are responsive to the needs of clients, staff and stakeholders, and the environment in which the RTO operates.
3.1	The RTO's management of its operations ensures clients receive the services detailed in their agreement with the RTO.
3.2	The RTO uses a systematic and continuous improvement approach to the management of operations.
3.3	The RTO monitors training and/or assessment services provided on its behalf to ensure that it complies with all aspects of the AQTF Essential Conditions and Standards for Continuing Registration.
3.4	The RTO manages records to ensure their accuracy and integrity.

Appendix D: Audit methodology

Audit process

The project consisted of the following steps:

1. establish and convene Reference Group
2. develop audit process and methodology and have endorsed by Reference Group
3. advise all RTOs with relevant scope of SIA and RTO survey to complete
4. finalise audit sample and methodology
5. establish technical advisor panel and conduct technical advisor briefing
6. assign audits and conduct auditors briefing
7. conduct audits of RTOs
8. conduct survey of employers
9. compile industry and strategic data/information
10. audit report drafted and distributed to reference group to comment
11. final audit report presented to Council for endorsement
12. endorsed report distributed to key stakeholders and published

The conduct of the SIA was in line with TAC's established audit process and the requirements of the AQTF Audit handbook.

Parameters for the audit

The Reference Group met on two occasions in November 2011 and March 2012 to discuss and confirm the roles and responsibilities of the Reference Group and the TAC Secretariat and to determine the objectives, scope, process and criteria for the audits.

The requirements established and agreed for the conduct of the audit were as follows:

- all RTOs that are actively delivering and intend to deliver one or both of the qualifications in WA will be included in the audit sample and have a site audit
- RTOs to be advised of the audit focus in line with TAC's established audit process
- compliance with the *AQTF Essential Conditions and Standards for Continuing Registration* to be recorded on the day of the audit
- technical advisors are to accompany the auditor on all site visits, where possible
- student records and assessments to be tracked during audit, including Capstone assessments, where appropriate
- feedback from students to be obtained as part of the audit process, interviewing students from across a range of years/stages, where possible
- employer interviews to be conducted as part of the audit process, and given their significant role in training and assessment, the level of employer engagement should be captured
- TAC's established system for recording and responding to compliance outcomes to be applied
- auditors to provide additional comment of a range of issues relating to training and assessment and as identified by the Reference Group

- a wider survey of employers to be conducted online with Reference Group members assisting with the promotion of the survey to their stakeholders
- preparation of a report on the outcomes of the SIA.

RTO survey

The Reference Group agreed to survey all RTOs with UEE30807 Certificate III in Electrotechnology electrician and/or MEM30405 Certificate III in Engineering – Electrical/Electronic Trade on scope of registration, with a WA delivery site on the national register. A letter was sent to all RTOs in this category to notify of the SIA and request completion of the survey online.

The survey collected data relating to delivery in WA, enrolments, qualifications issued, delivery modes, pathways and client groups. The survey also provided RTOs with an opportunity to raise issues or concerns about the qualifications that may require consideration during the audit.

Determination of the audit sample

Data collected from the survey provided relevant and current information on the activity of RTOs in relation to the delivery of the identified qualifications in WA and contributed to the risk assessment and determination of the final audit sample. The survey responses were analysed and reported to the Reference Group for consideration.

The Reference Group agreed that the audit sample for the SIA would include:

- all TAC registered RTOs registered for one or both of the identified qualifications
- all RTOs registered with other registering bodies that actively delivered one or both of the qualifications in WA.

The survey results indicated that no RTOs fell in the second category. The audit sample, of RTOs in the first category, matched with the list of training providers approved with EnergySafety.

Audit team briefing

Due to the technical and complex nature of the qualifications it was agreed that technical advisors would participate in site audits of the RTOs, where possible. Technical advisors play a valuable role in the provision of specific advice on industry and licensing requirements. Due to the small number of nominated technical advisors individual briefing sessions were conducted in February 2012. The purpose of the briefing was to:

- provide an overview of the SIA
- discuss the role of technical advisors at audit, including audit protocols, conflict of interest issues and confidentiality requirements
- discuss the process, focus and specific requirements of the audit.

A briefing for TAC's external panel of auditors was held in February 2012. The purpose of the briefing was to:

- provide the background and overview of the SIA
- provide an overview of the electrical licensing system and issues raised by the Reference Group
- discuss the audit process, focus and specific requirements of the audit, including the role of technical advisors.

RTO audit reporting tool

Auditors used the standard TAC template for reporting audit outcomes, through the online AuditorNet facility. The supplementary data and additional information requested by the Reference Group was included in the audit reports. The reports were analysed by the TAC Secretariat and informed the findings outlined in this report.

Conduct of audits

Audits were conducted by members of TAC's external panel of auditors and undertaken as site visits. The compliances and non-compliances identified in this report are based on the outcomes on the day of the audit. It is important to note that for an RTO to maintain registration under the AQTF it must be fully compliant with the AQTF.

TAC processes allow for RTOs that are found non-compliant against the *AQTF Essential Conditions and Standard for Continuing Registration* at audit to provide additional evidence within a specified timeframe, 20 working days after receipt of the audit report, in order to demonstrate compliance.

In some instances provision of additional evidence is sufficient to demonstrate compliance with the Standards; however where non-compliances remain, the matter is referred to TAC for further consideration and action.

Employer Survey

The Reference Group agreed to a survey of employers to obtain information on the quality of training and assessment, satisfaction with training provided by RTOs and ability of recently qualified electricians. The survey was open to all stakeholders who wished to provide comment.

The survey was administered by the TAC Secretariat, through the use of an online survey tool. The invitation to participate in the survey was directly sent to employers of current Electrical Mechanics and Electrical Tradesperson (Electrical) apprentices (UEE30807 Certificate III in Electrotechnology Electrician) and (MEM30405 Certificate III in Engineering – Electrical/Electronic Trade respectively), though the survey was not limited to employers with apprentices. The Reference Group also assisted in the promotion of the survey to its wider stakeholder group.

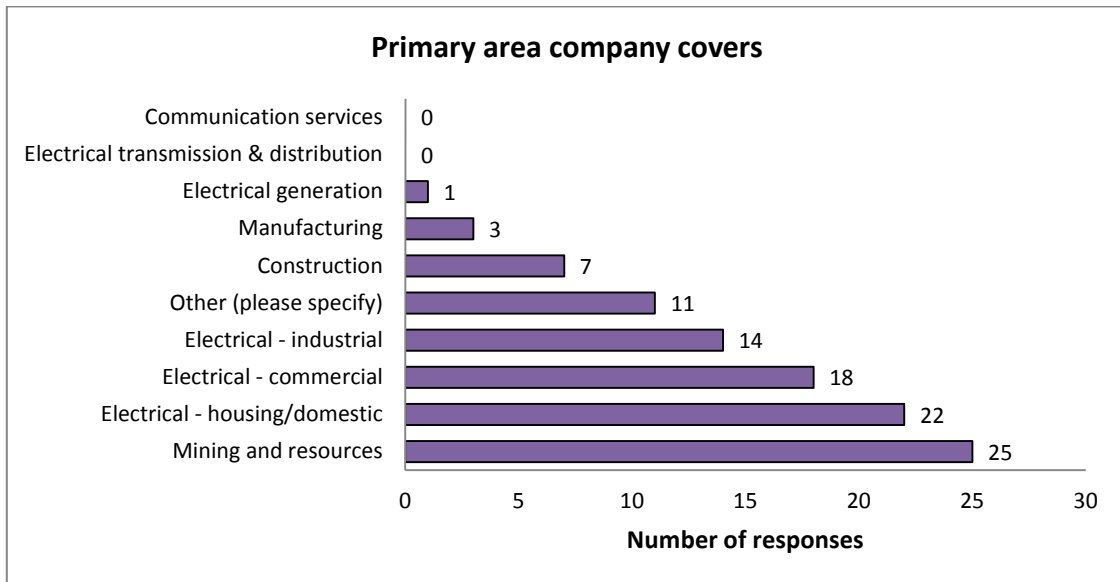
A copy of the Employer survey is provided at **Attachment 4**.

Over 100 responses were received to the survey. The responses to all non-mandatory questions have been analysed and the outcome is included in the body of this report.

Appendix E: Employer survey responses

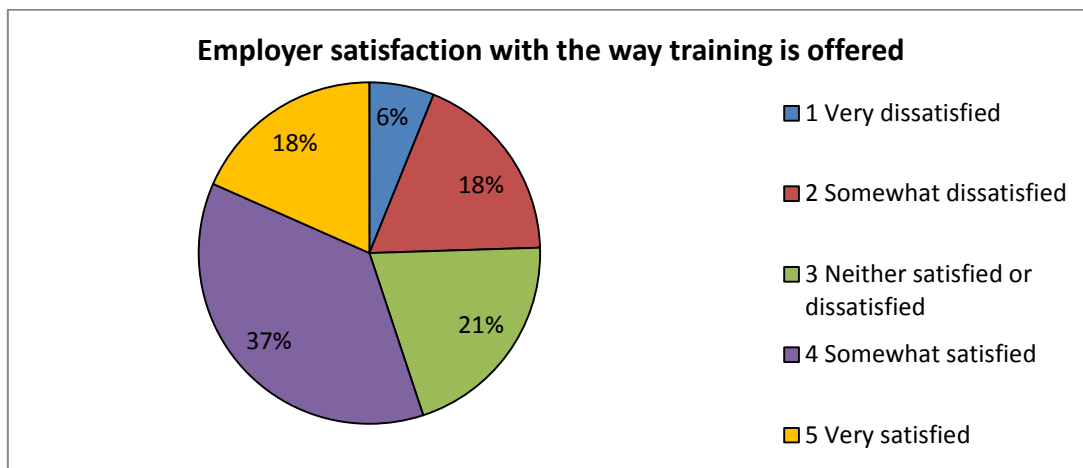
The data gathered from the employer survey is represented below.

- Nearly 25% of the 101 employers that responded primarily work in the mining and resources industry area, as represented in **Graph 10**. The employers who listed “other” included electric motor rewinding; grain storage and handling; security; automatic doors, gates and high security entrances and all of the above.



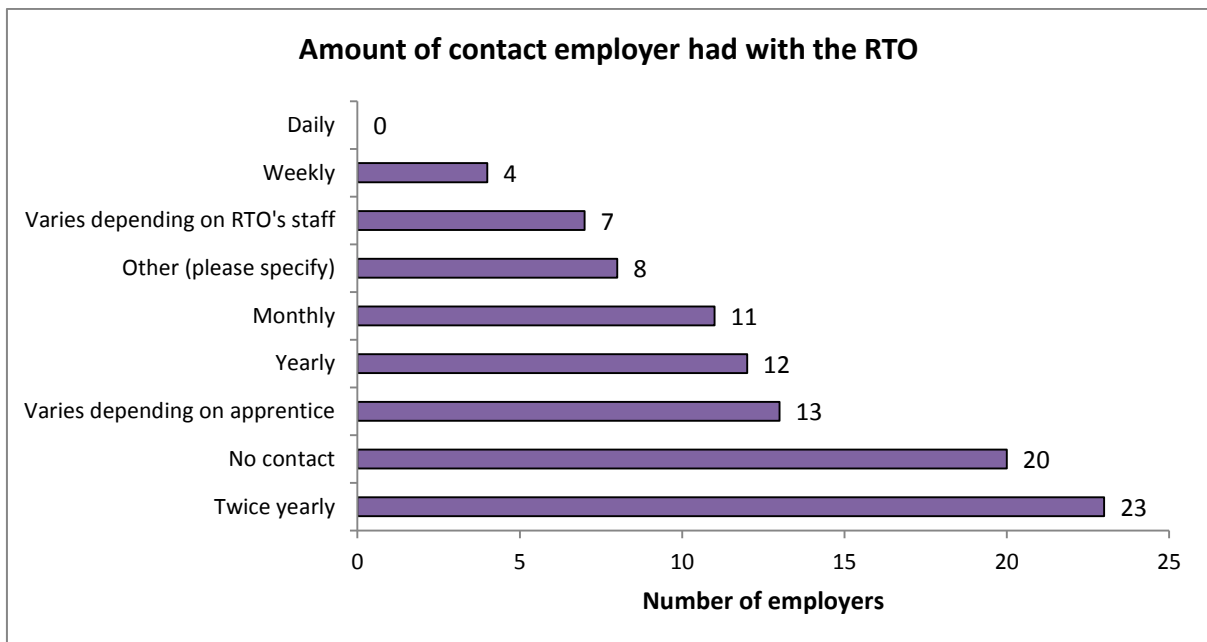
Graph 10: Distribution of primary area of responding employers

- 98 of the 101 employers currently have electrical apprentices working for them
- Of these 98 employers 31 (~32%) had apprentices in MEM30405 Certificate III in Engineering Tradesperson – Electrical/Electronic; 49 (50%) had UEE30807 Certificate III in Electrotechnology Electrician apprentices; 13 (~13%) had apprentices in both qualifications and 4 were unsure. One employer indicated their apprentice(s) was “Electrical/Instrument”
- In response to how their apprentices do their training, the most common mode selected was on the job training (71%), followed by block release (31%). 30 responses indicated “other”, with the majority of explanations being day release and weekly at RTO
- 37% of respondents indicated they were “somewhat satisfied” with the way training is offered; 18% indicated they were “somewhat dissatisfied”, as outlined in **graph 4** below



Graph 4: Employer satisfaction with the way electrical apprenticeship training is offered

- **Graph 5** (below) demonstrates the amount of contact employers reported as having with a representative of the RTO, which included visits to apprentices onsite and phone calls to discuss current progress. 23% of respondents indicated they had contact with the RTO twice yearly; 20% selected that they no contact with the RTO.



Graph 5: Amount of contact employers have with the RTO

Comments following the 'Other' option include "all contact initiated by myself", "minimal contact, would prefer phone or email say quarterly on progress", "only email to inform of block training dates", "twice yearly from one RTO but no contact from the others", "very rarely. It is usually me contacting them to find out what is going on".

- Just over 70% of the employers with current apprentices indicated that the RTO requested that the employer verify the evidence of the apprentice's work that it used towards their assessment. 25% indicated this did not occur.

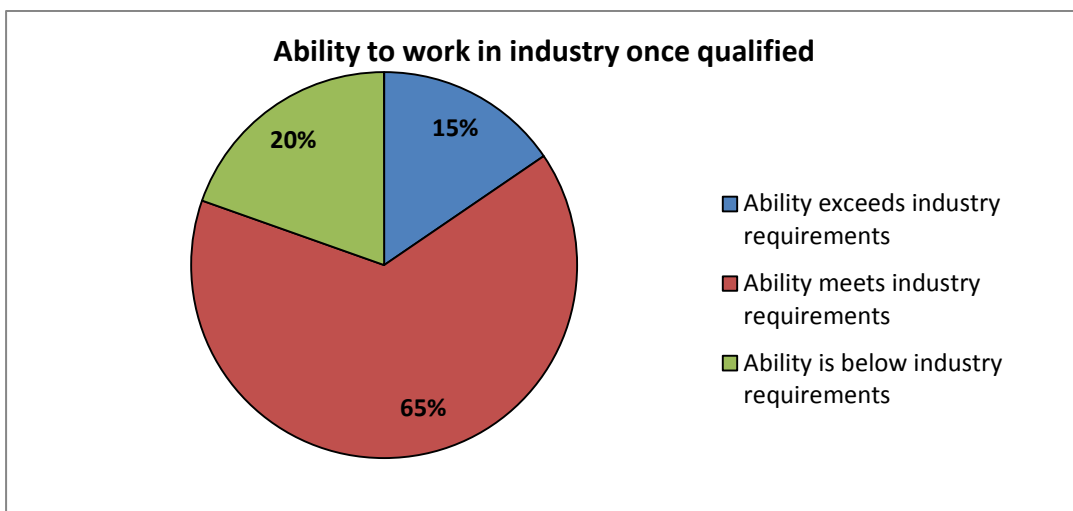
Comments supporting this question included:

- *There has been an electronic tracker established to record the on-the-job experiences. How this is then linked to assessments is not transparent*
- *I deal with all of the metro area and some regional tafes and some are better than others. I find the online tracking works the best.*
- *Has in the past but not recently to my knowledge*
- *None of the 3 providers (2 State providers 1 Private provider) we use have ever confirmed the employer sign off on the training record books*
- *This has become an issue as in WA they have changed methods and are asking the apprentice to now go back and prove with dates etc, this has become a issue for my staff to now go through the paper work to find info for him*
- *Through a task book. List of authorised people who can sign not asked for by provider*
- The overall ability of recently qualified apprentices to understand the requirements of their role and work effectively in industry was rated in the image below in **Graph 6**.

Comments accompanying this question included:

- *All dependant on the Apprentice, have exceptional where exceeds requirements, other boys do well though.*

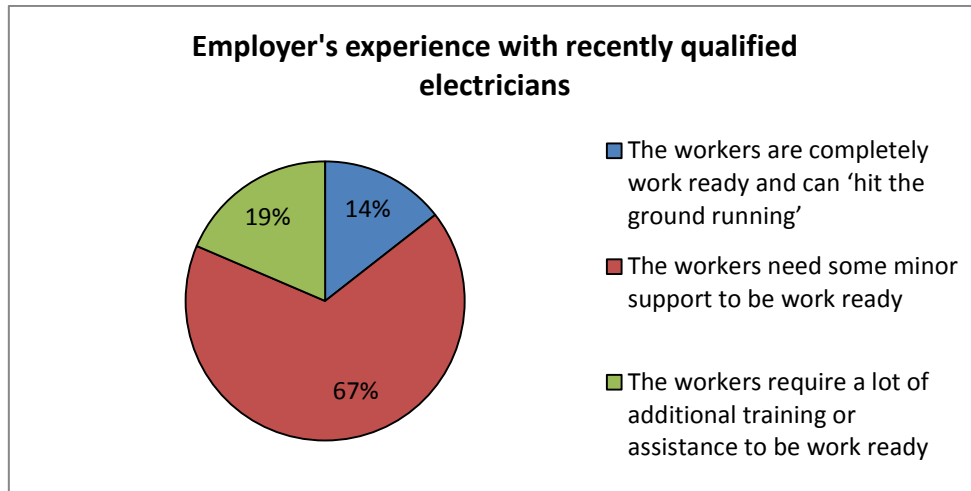
- *Being HV specialists there are some areas of the electrical trade that our apprentices do not get full exposure to. We are looking at sending them out with standard elec contractors to gain this experience*
- *Due to our concerns about the level of skills and knowledge of our apprentices we have recently had an independent review and assessment of all our 3rd and 4th year apprentices. The results of this assessment have highlighted that these apprentices have significant gaps in their skills and knowledge. Consequently we have now had to initiate additional training programs*
- *Lack of basic understanding of hand tools/reading of single line diagrams/basic fault finding*
- *Most apprentices don't actually learn the ropes until they are given the ability to take jobs on. With the electrical supervision regulations on supervision and the OH&S across the industry it is hard to actually give them some freedom to complete tasks on their own until completion for fear of retribution if something goes wrong.*
- *Most new tradespersons have little knowledge of testing regimes or requirement and very little knowledge of wiring rules regulations.*
- *my lads work one on one with tradesman and yes they suffer a bit of gen Y problem but generally have their head in the right place*
- *Not all apprentices can step in and do all the necessary work because they may not have had exposure to all types of work i.e. domestic to commercial to industrial. If you have mainly been do office fit outs you can't step into a tradesman role doing commercial or housing efficiently*
- *Our Apprentices & Tradesmen are in extraordinarily high demand - testimony to our training methods and demand by the resource sector.*
- *Really depends on the individual and where they or who they did there apprenticeship with.*
- *technically they are good but there is no basic hand tool skills and mechanical skills. ie. they know the theory but lack the ability to perform what used to be standard skills. We press the need for quality with our apprentices but our experience has now become a policy of only employing*
- *The Ability of apprentices is subject to the areas of work that they have been subject to in their apprenticeship*
- *The capability of recently qualified apprentices varies greatly, due to the confidence and personality of the apprentice.*
- *We have had apprentices come from large corporate companies who have passed their capstone but as an employer we would not allow them to work unsupervised as they have not received the proper training and do not know how to complete basic trade tasks.*



Graph 6: Employer response to the ability of new graduates and their ability to meet industry requirements

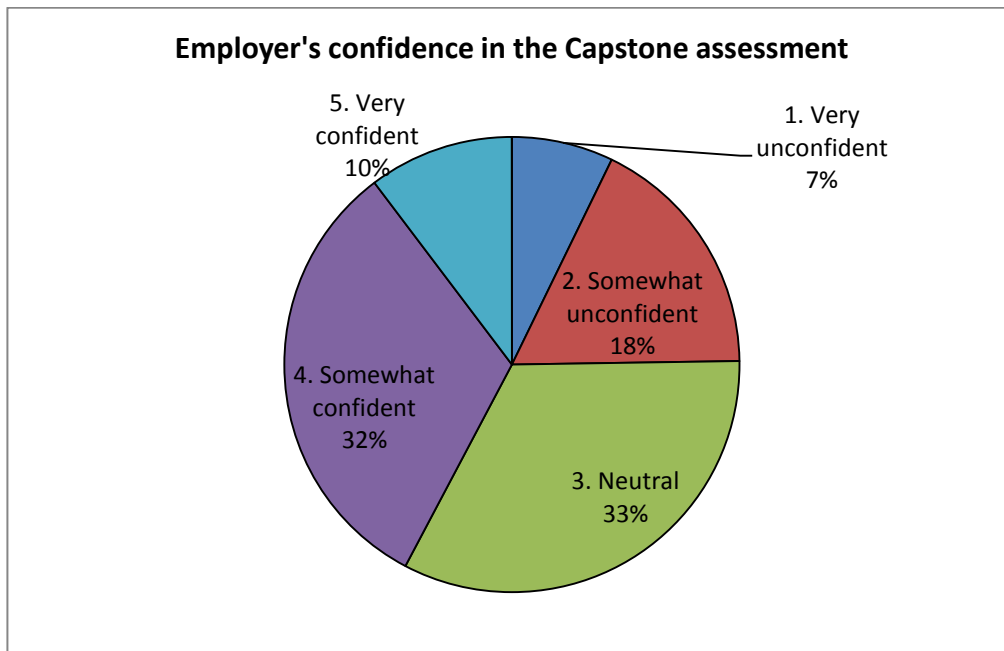
- When asked if employers believe if apprentices are receiving the full range of training experiences they need during their apprenticeship to prepare them to work in the industry, 57% of respondents said yes, while 43% indicated no. Comments to support the response include:
 - *Anyone can have an apprentice and many shouldn't because of the lack of good training or variety the apprentice is exposed to and gains experience in. On the other side good employers who give good training and experience to the apprentices are not recognised for there renewal of the electrical community.*
 - *But they do not start fully learning when out of their apprenticeship, there are just so many areas to learn! Some need to get their confidence up and this can only happen over time.*
 - *Concerns have been raised about the contextualisation relating to mining equipment and machines. There is concerns about licensing and outcomes required to achieve a license. This links to the contextualisation of training content etc.*
 - *Feedback from our 107 electrical apprentices clearly indicates that they have been exposed to poor quality training. In some instances the resources used have been sub-standard.*
 - *I believe that apprentices receive the full range of training on our site due to being moved around to each area including underground services. TAFE seems very generic and not really tailored to suit each industry*
 - *I think some company's only work in one area for entire apprenticeship so experience limited*
 - *Lack of installation experience*
 - *Mining and resource apprentices cannot use hand tools let alone do electrical work. However apprentices that have served their time at one employer and preferably privately run are far more able and experienced*
 - *Need more experience in complex control wiring and fault diagnosis*
 - *Most training seems to be for house wiring and industrial electrical work is missed*
 - *Much of the work has to be taught by the employer, the scope of TAFE is not comprehensive enough*
 - *Not all apprentices. Depending what field they are in depends how they turn out. For example you can do an electrical apprenticeship installing solar panels and in a lot of cases that's all they do so they shouldn't come out a qualified electrician as they don't have a clue about anything else.*
 - *Restrictions with safety requirements make it difficult*
 - *RTO is out of date and out of touch.*
 - *Some apprentices are subject to only one type of work and find it hard to adapt to the other more demanding areas of the electrical field. Our apprentices have worked across a wide range of areas and their knowledge base is far greater than that of a House wirer*
 - *The tutors for one of the apprentices has not the knowledge to train the apprentice. This is a major problem for electrical apprentices at [RTO].*
 - *They could do a lot more in receiving industry qualifications that is mandatory in today's work ie working at high ticket, EWP, confined spaces as a few examples.*
 - *Unsure as to what exact training they get, possibly due to the lack of contact from training provider.*
 - *Yes but it needs to be well coordinated and monitored by the employer.*

- **Graph 7** depicts the experience employers have with recently qualified electricians. 67% of respondents selected a statement “*that workers need some minor support to be work ready*” which best described their experience with workers who had recently finished their apprenticeship, passed the Capstone Assessment and have their licence



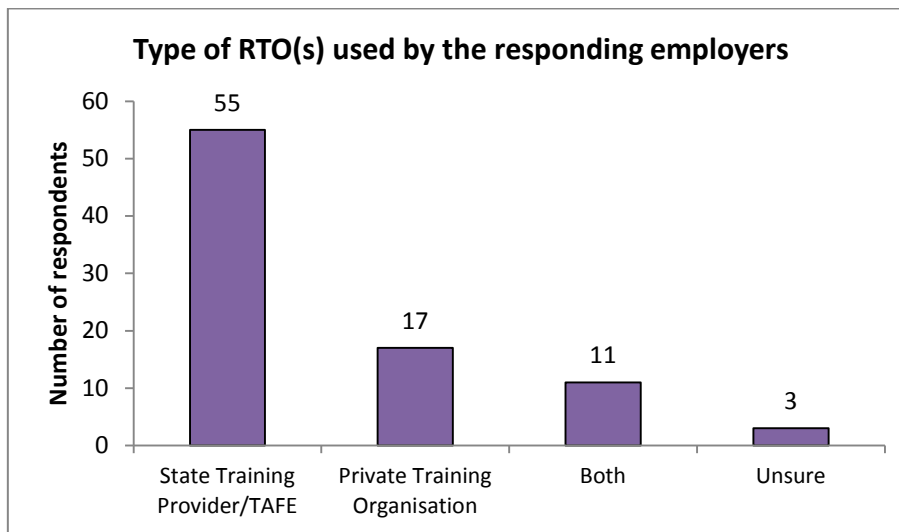
Graph 7: Representation of employers experiences with recently qualified electricians

- Employers were asked to indicate their confidence in Capstone test as a good indicator that a person should get their electrical licence. **Graph 8** represents the responses received. 32% rated being “somewhat confident” with the Capstone test being a good indicator that a person should get their electrical licence; 10% are “very confident” and 7% selected that they were “very unconfident”



Graph 8: Employer confidence in the Capstone assessment

- The type of RTO(s) used by responding employers is displayed in **Graph 11**



Graph 11: Breakdown of types of RTOs used by responding employers

The survey provided free text fields for additional comments from employers against various topics. The key themes of the comments provided are summarised below, and quotes from various responses have been included. Note that these comments have not been validated or verified.

The Qualifications or Training Packages:

- One Training Package to service the electrical industry area with a selection of different pathways
- Apprentices who have completed the qualification have theoretical understanding of the job but no real workplace experience

'Training needs to be industry focused for the type of work that is undertaken'

'Too much emphasis on theory, a lot of the training is way beyond the requirements of the trade'

'The new system of only licensing 'electricians' is discriminatory'

'Scrap either the metals or utilities package and have one across the whole state'

'Both training packages should be interlinked so the apprentice can experience the full range of electrical training.'

'Training Package does not reflect real world work requirements'

'Should only be one Training Package to service the Electrical Area with different pathways for electrical installation and electrical maintenance'

'Apprentices have the qualification when they finish, but no real knowledge of how what they have learned relates to everyday experience'

The Electrical Licence:

- Too much emphasis is placed on the Capstone test which is weighted in favour of the domestic electrical industry.
- The application and approval process for Apprentices to receive their license is very slow
- Have two licenses for Fitters and Installers that are clearly outlined in one Training Package

'The issue of an electrical licence does not mean a person is competent, RTOs must develop a better assessment of competency than the Capstone test.'

'I am not sure that by completing the Capstone test, that the apprentice is now deemed to be competent.'

'Apprentices have to wait to get their licence after completing the apprenticeship'

'Too much emphasis is placed upon this license. It seems that once someone has this 'golden ticket', no real care is taken to maintain first rate standard of work.'

'The Capstone is a poor measure of electrical understanding and is weighted too far in favour of a tiny section of the electrical industry (domestic)'

'Recent changes to the electrical licence have been a poor decision for the mining and resources sector and it's apprentices'

'Not sure the effectiveness of a 2 day test at the end of 4 years'

Registered Training Organisations:

- Shortage of qualified trainers and assessors
- Quality of training and assessment being delivered is poor
- RTOs need to have more contact and involvement with Employers
- RTOs are signing off Apprentices as Competent when employers are not confident in the apprentice's abilities. Employers do not feel like they are able to voice their concerns with the RTO.

'RTOs need to work with industry to ensure the training that is delivered meets the industry need'

'Very often training is deferred due to staff shortages'

'RTOs need to maintain their staff and send them out to gain current work environment experience'

'RTOs are not understanding industry needs and are not actively seeking industry participation and feedback'

'Quality of delivery is poor and often resources used are sub-standard'

'We have 107 apprentices and the RTOs have never been to site to determine that we have the relevant qualified people delivering and/or signing of training record books;

'RTOs are not verifying that the on the job trainers have the relevant VET quals'

'No feedback what so ever until it is too late. It is hard to do on the job training because we don't know what modules are coming up. More is expected from employer less from RTO'

The Training System:

- Training and assessment needs to be closer aligned and relevant to industry needs
- Training needs to be accessed for each apprentice to ensure that there is no skill gaps created by work placement.

'There needs to be a concentrated effort to improve training for those that are not exposed daily to equipment used in industry'

'Some apprentices are struggling to understand some of the material because of the delivery'

'The training system does not prepare the apprentice for the responsibility and obligations that are enforced by the Office of Energy and their Inspectors.'

Suggestions and Improvements:

- Involve industry and EnergySafety when developing Training Packages
- RTOs should review the skills that Apprentices daily use at the workshop and provide further training for skill gaps.
- A line of communication between the RTO and the Employer needs to be established
- A clear distinction between the domestic and industrial electrical trades needs to be established.

'There should be a clear distinction between Domestic and Industrial Electrical Trades'

'More information from the training provider in regard to the apprenticeship would give me the opportunity to assess what they are being taught and therefore give more input'

'If the regulator is beating the drum of compliance, the focus of training whether in the class room or on the field must be on testing test procedures and the total understanding and "interpretation" of results'

'Trades should be taught the principals of electricity but should be shown how it relates to everyday apparatus.'

General Comments:

- The Training and Assessment Apprentices receive at RTOs appears to be out of date and not conforming to regulations and guidelines. Apprentices also have knowledge and skill gaps and struggle to answer general questions.

'We are extremely concerned about the quality of electrical training in WA'

Attachment 1: Essential Performance Capability Requirements for Licensed Electricians



NATIONAL UNIFORM ELECTRICAL LICENSING ADVISORY COUNCIL

LIST OF ESSENTIAL PERFORMANCE CAPABILITY REQUIREMENTS FOR LICENSED ELECTRICIANS

Explanatory Note

This policy document was developed by NUELAC's Electrician Working Group, later approved by NUELAC on 13 February 2001 and then released for industry information on 1 March 2001.

NUELAC membership covers various government and industry interests relevant to the safe and competent performance of electrical work. NUELAC therefore includes the electrical industry associations and technical/safety regulators (licensing authorities) of all Australian States/Territories. New Zealand is an observer. The document has been approved by the Electrical Regulatory Authorities Council (ERAC) for use by the various licensing authorities.

The purpose of the document is to provide clear guidance to Registered Training Organisations (RTOs) in Australia about the regulatory requirements that a trainee must satisfy, before he or she can be issued with an Electrician Licence.

Failure by an RTO to provide evidence (to the satisfaction of the relevant licensing authority) that the training (including assessment) delivered to a licence applicant satisfies the stated requirements and forms an integral part of an *approved National Training Package qualification, which means the applicant has successfully passed a "capstone assessment" in accordance with specified requirements, will result in the applicant being required to undertake further assessments at the discretion of the licensing authority.

This document shows both the overall essential capability list as well the critical items within that list, thus detailing part of the requirements for the "capstone assessment" of each trainee.

The over-arching objective is that the training for a prospective electrician must deliver at least the "essential performance capability" requirements, and that the capstone assessment will confirm that the most critical of these has been attained by the applicant.

*Approved National Training Package means an ANTA National Training Quality Council endorsed National Training Package qualification, that includes the "Capstone Assessment Test" as approved by ERAC/NUELAC, within the respective industry's training program where recommended.

Enquiries: Please contact the Electrical Licensing Authority in your Australian State/Territory.

**LIST OF ESSENTIAL PERFORMANCE CAPABILITIES FOR
PROSPECTIVE ELECTRICIANS
(with “Critical Items” shown)**

Preface and Context:

The following tables list the various essential or minimum capabilities expected of a licensed Electrician in any State/Territory in Australia. To put this statement into a workplace competency context where relevant, a person seeking an electrician licence needs to be capable of competently and safely performing the tasks set out in the tables, in a wide variety of typical industry environments, working independently and without supervision.

Furthermore, the person needs to know what action, if taken, will void the integrity, compliance and/or certification of electrical equipment or an electrical installation.

“Typical industry environments” is to be taken to include routine types of commercial premises and office buildings to 10 levels, industrial sites of modest complexity (with some HV plant and hazardous areas), institutional premises of modest complexity (eg high schools and non-specialist hospitals), and residential premises (single dwellings, multi-unit buildings including high rise units).

The applicant will be able to competently:-

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
1.	Demonstrate a knowledge of basic electrical and energy concepts.	Fundamentals of electrical energy, other energy forms, voltage, current and resistance.	
2.	Demonstrate a knowledge of the various effects of electric current.	Physiological effects on humans, heating and other energy conversion effects and principles.	Critical
3.	Demonstrate a knowledge of resistivity and resistors.	Ohm’s law, material resistivity, resistor parameters and introduction to measuring methods.	
4.	Demonstrate a knowledge of the various sources of electromotive force (e.m.f.).	How electrical energy is produced from various forms of energy, including batteries.	
5.	Explain the operation of a simple practical circuit.	Include current path, circuit control, load, EMF source and conductors.	Critical

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
6.	Determine the resistance, voltage, current and power in any part of a DC circuit using theory and actual measurement methods.	Theoretical and practical knowledge of measuring instrument use and safe practises whilst using instruments. Include series and/or parallel circuit analysis.	Critical
7.	Demonstrate a knowledge of the theory and application of Capacitors and Inductors.	Concepts and characteristics of Capacitors and Inductors and their application in DC circuits.	
8.	Demonstrate a knowledge of permanent and electro magnetic theory and application.	Magnetism, magnetic induction, magnetic fields and the fundamental magnetic quantities.	
9.	Demonstrate a knowledge of electromagnetic induction and state practical examples which make use of this principle.	Principles of EMF induced in a conductor and its application in electrical machines and devices.	
10.	Demonstrate a knowledge of Capacitance and Inductance in AC circuits and their effects.	To include calculation of capacitive and inductive reactance, effects on V and I phase relationships, resonance and impedance in AC series and parallel circuits.	
11.	Demonstrate a knowledge of alternating voltage & current generation, phase relationships, energy in an AC circuit, and actual measurement methods.	Explain sinusoidal voltage generation and resultant current flow. Define key terms, calculate and apply measuring techniques to derive required parameters. Eg power factor.	Critical
12.	Describe Star and Delta three phase AC systems and the reason why three phase is used.	Multiphase systems and their advantages – reduced current flow, equipment size etc. Calculation (phase diagrams) of line and phase voltages.	
13.	Demonstrate an understanding of the fundamental safety principles of the AS/NZS 3000:2000 Section 1.	Definitions, alterations, protection, design, selection and installation of electrical equipment for electrical safety requirements. This includes protection from direct and indirect contact with live parts.	Critical
14.	Demonstrate a knowledge of power factor, power factor improvement principles and power measurement techniques to AC circuits in 1 and multiphase systems.	Consequences of low power factor, value of capacitance required for correction, measurement theory and methods to obtain real power and apparent power values.	
15.	Describe the rationale and operating principles and characteristics of three phase induction motors and generators.	Concept of a rotating magnetic field, stator and rotor construction. Power, torque and speed relationships.	

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
16.	Describe methods of electric motor selection, starting, connection and protection.	Reduced current starting, methods of starting (star-delta etc), typical motor lead terminations and protection (including by electronic devices) of the motor from environmental, overload, internal faults and supply variation conditions.	Critical
17.	Describe the AS/NZ 3000:2000 and local Supply Authority requirements for three phase motor installations and starters.	Design of motor circuits for operator control, isolation, automatic starting and emergency stopping. Starting methods required by the local supply authority to limit the transient current.	
18.	Describe the possible causes of malfunction of three phase induction motors and demonstrate the tests required for diagnosing faults	Common causes of malfunction – starting equipment failure, insulation deterioration, water ingress etc. Common testing methods – voltage, ampere and insulation resistance checks.	
19.	Describe the operating principles, typical control methods and characteristics of single phase motors and their key components.	The rotating magnetic field and components for single phase motors, methods to achieve starting and operating torque. Control methods used including voltage/speed reduction, reversal and impact on performance.	
20.	Describe the suitability of various types of single phase motors for particular applications and describe the fault finding methods.	Application of various motor starting/operating torque curves to various mechanical loads. Eg drills, fans and pumps etc.	
21.	Describe and apply in practice the requirements of AS/NZ 3000:2000 in relation to earthing arrangements and fault loop impedance calculations.	Earthing arrangements for protective and functional purposes, earthing connections and conductor selection. Calculation of the correct cable size for an installation to achieve protective device and cable co-ordination.	Critical
22.	Demonstrate a comprehensive knowledge and understanding of the MEN system and its application, including on sub-installations.	Multiple Earthed Neutral arrangement, resultant fault current path and magnitude, operation of protective devices and implication of MEN link absence during fault condition.	Critical
23.	Describe the basic construction of transformers.	Design of different types of core lamination styles, winding types and assembly techniques.	

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
24.	Demonstrate understanding of the principle of operation of transformers.	Production of secondary winding induced EMF from primary winding and core. Open circuit and full load parameters.	
25.	List the main types of transformers.	Single and double wound, auto, current and voltage transformers.	
26.	List typical applications of various types of transformers and key safety issues.	Distribution and transmission systems, large consumers' installations, within electrical equipment, appliances including welders. Safe working procedures when connecting and testing transformers.	Critical
27.	Describe and apply in practice the requirements for circuit protection using AS/NZS 3000:2000 and other relevant Australian Standards. Eg AS/NZS 3018.	Causes of excess current (and voltage) within a circuit. Calculation and selection of protective devices to satisfy the required Standards.	Critical
28.	Demonstrate a knowledge of the SELV, PELV and earth leakage current protection systems and their application in accordance with AS/NZS 3000:2000.	Protection against both direct and indirect contact using SELV and PELV systems. Protection using Residual Current Device.	Critical
29.	Demonstrate the ability to select cables for mains and submains using AS/NZS 3000:2000 and AS/NZS 3008.1 based on current carrying capacity, short circuit capacity, maximum demand and voltage drop, for single phase and three phase installations including multiple installations.	Determination of maximum demand, voltage drop, interpretation of cable supplier data tables and the impact of various installation methods. Selection of the appropriate cable installation route/method.	Critical
30.	Demonstrate the ability to select cables for final subcircuits using AS/NZS 3000:2000 and AS/NZS 3008.1 based on current carrying capacity, short circuit capability, maximum demand, earth loop impedance and voltage drop.	Application of maximum demand methods to calculate current requirements and ensure voltage drop is within specification, evaluation of the installation method.	Critical
31.	Describe the control and protection requirements for installations and equipment. Demonstrate the ability to select suitable equipment and switchgear for a particular installation or part of an installation.	Main board controls, sub-installation control and submain/final subcircuit controls. Assessment of the prospective short circuit current and operating current. Selection of equipment and suitable protection equipment to protect conductors and installed equipment. Inclusion of RCD's where required.	Critical

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
32.	Demonstrate an understanding of the AS/NZS 3000:2000 and regulatory requirements for the location of switchboards and arrangement of switchboard equipment in installations	Suitable locations for switchboards (eg well ventilated and dry) including personnel access requirements. Requirements for metering and equipment positions and the identification of switchboard equipment (and the switchboard).	
33.	Demonstrate an understanding of the AS/NZS 3000:2000 and regulatory requirements for the installation of electrical equipment in given damp situations and wet areas.	Damp zones and related equipment requirements. Assessment of the earthing requirements and wiring systems for damp and wet areas as per Section 7 of the AS/NZS 3000:2000 Wiring Rules.	Critical
34.	Demonstrate the appropriate methods for the installation, modification and testing of electrical installations and equipment for construction and demolition sites, complying with AS/NZS 3012 and applicable workplace safety legislation.	Assessment of supply requirements, final circuit protection and socket outlet requirements. Portable tool tagging requirements to AS/NZS 3760 and electrical installation testing requirements.	Critical
35.	Demonstrate knowledge of AS/NZS 3000:2000 requirements for the installation of aerial conductors and underground wiring.	Various types of aerial conductors and their application/installation methods. Assessment of underground and aerial conductor ratings and selection process. Underground cable installation systems.	Critical
36.	Demonstrate a knowledge of the AS/NZS 3000:2000 requirements for electrical installations in hazardous areas and an awareness of the standards to which it refers (e.g. AS 2430, AS 2381.1).	Basics as set out in AS/NZS 3000:2000, awareness of concepts and practices in specialised standards.	Critical
37.	Demonstrate knowledge of the AS/NZS 3000:2000 requirements and the standards referenced for special electrical installations including emergency systems, and construction/demolition sites.	Standards for special installations eg Movable premises, Caravan parks and Shows and Carnivals AS 3001, High Voltage Neons AS/NZS 3832, standards for the electrical installations of emergency systems and construction/demolition sites	
38.	Describe and perform to AS/NZS 3000:2000 and AS/NZS 3017 standards the electrical checks and tests required to ensure electrical installations are safe.	Tests to ensure the requirements of the Standards have been met, include: visual checks, testing energised and de energised circuits – earth continuity, insulation resistance, polarity test, fault loop impedance tests etc.	Critical

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
39.	Demonstrate the reporting of test results for an electrical installation as typically required to satisfy regulatory requirements.	Statutory documentation requirements and the practices necessary to achieve compliance.	
40.	Demonstrate the knowledge and skill to perform effective safe isolation of any equipment, including switch and lock off, circuit isolation, equipment testing and tagging procedures.	The sequential steps needed to achieve an isolated, tested and safe work area. Preparation of a written isolation procedure.	Critical
41.	Describe the construction, specifications, colour coding and application of various types of cords and cables.	Conductor material, stranding, colour coding, sheathing types and other construction parameters of cords and cables. Typical application examples of the various cable types and interpretation of cable manufacturers data.	
42.	Demonstrate the skill to prepare and terminate cords and cables.	Requirements for cable jointing and termination in a variety of installation situations and accessories.	
43.	Demonstrate the Selection and attachment of electrical accessories, using appropriate fixing devices and methods.	Various fixing devices, methods and the tools which may be used – need for safety whilst performing this work.	
44.	Demonstrate the knowledge and skill to install and terminate a variety of electrical cables in a wide range of applications (including final subcircuits) to AS/NZS3000:2000.	Installation requirements for a wide range of typically used electrical cables in a variety of situations: e.g. thermoplastic, elastomer sheaths, XLPE, high temperature cables. Separation from other services (and fire wall penetrations).	Critical
45.	Demonstrate the knowledge and skills for the installation of wiring support systems	Steel conduit, PVC conduit, ladder/perforated tray, trough/duct, including ratings, space, etc.	
46.	Describe and perform the circuit tests required for electrical cables in a range of installations, with attention to the final subcircuit tests.	Earth continuity, insulation resistance, fault loop impedance, polarity and correct circuit connection tests.	Critical
47.	Instal final subcircuit wiring into switchboards and connect to switchboard equipment in accordance with AS/NZS 3000:2000 and local supply authority requirements.	Termination of subcircuit cabling at switchboards and connection to components.	Critical

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
48.	Connect consumers mains to an installation, in accordance with AS/NZS 3000:2000 and local supply authority requirements.	Installation of consumers mains in buildings and underground. Termination at pillars, pits and mains connection boxes. Bonding of metallic meter enclosures.	Critical
49.	Determine and apply AS/NZS 3000:2000 and AS/NZS 3008 requirements for the installing, terminating and testing of MIMS and Armoured cables. This is to include the cable type selection to AS2381 (or other standards) requirements.	Assessment of cable ratings according to installation method and location. Installation and termination of MIMS and armoured cables and accessories and necessary tests.	
50.	Determine and apply AS/NZS 3000:2000 requirements for the installing, terminating and testing of catenary supported cables, pendant-type socket outlets and trailing cables.	Assessment of the requirements for installation of cables and accessories supported by catenary wire, techniques of installing trailing cables.	
51.	Demonstrate ability to read, sketch and interpret electrical diagrams.	Purpose and characteristics of schematic, block and wiring diagrams, typical symbols used.	Critical
52.	Design and connect switching circuits, including via electronic logic controls, as per AS/NZS 3000.	Lighting and equipment control circuits. PLCs at basic level. Other types of logic controllers (eg C Bus).	
53.	Describe basic statutory occupational safety and health responsibilities for employers and employees, including supervisory requirements and employees' own "duty of care".	Occupational Safety and Health regulations and electrical safety regulations - legal requirements, safety committees and duty of care.	Critical
54.	Demonstrate understanding of the requirements for personal safety in the workplace including safe isolation and application of safety practices.	Adoption of safe working practices, incident reporting process and responsibility to co-workers. Reference to safe electrical work guidelines issued by regulators, including supervision requirements applying to apprentices and trainees.	Critical
55.	Describe a workplace safety check, identify potential workplace hazards and suggest measures for accident prevention.	Workplace safety inspections. Reference to guidelines issued by both electrical safety regulators and general workplace safety regulators including the supervision requirements applying to apprentices/trainees..	

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
56.	Demonstrate the knowledge and practices that are essential for working safely with electrical equipment and tools and knowledge of testing and tagging procedures to AS 3760.	Testing and tagging procedures, common causes and prevention of electric shocks and incidents . Safe use of hand and power tools , including power actuated fastening devices, ladders, elevated work platforms, etc	
57.	Describe the method of rescuing a person in contact with live electrical conductors or equipment.	Fundamental principles of emergency procedures.	Critical
58.	Describe the emergency first aid requirements for an electric shock victim and demonstrate the knowledge and application skill of EAR and CPR.	Application and learning of EAR and CPR procedures to resuscitate and stabilise a victim. Use of fire extinguishers to control electrical fire at accident site.	Critical
59.	Demonstrate knowledge and understanding of the significant dangers of High Voltage equipment and distribution systems.	Step and touch voltages, induced voltages, creepage and clearance requirements. Stored energy and earthing requirements. The use of safe working procedures.	Critical
60.	Describe the types of potential operational situations that may be encountered in various areas of industry, that will require assistance from more experienced industry personnel.	Eg 1. The need to isolate and earth an item of equipment supplied at High Voltage, for repair or maintenance work. Eg 2. The need to sequentially shutdown and isolate a gas fired boiler in preparation for electrical maintenance.	
61.	Describe the type of assistance that may be needed for operational situations that could be encountered in various areas of industry.	Continuing the above examples Eg 1. Consulting experienced local operational personnel to obtain advice on H V Switching procedure and earthing arrangements. Eg 2. Consulting experienced personnel for the advice to shut down the boiler in a safe manner.	

	ESSENTIAL CAPABILITY	COMMENTS	Critical Item
62.	Describe methods of commissioning and/or decommissioning electrical equipment or an installation, using a systems approach.	Commissioning: Circuit voltage testing, phase rotation checks, systematic loading up, correct installation functioning and instrumentation/-control parameter checks. Decommissioning: Identification of all circuits, impact on other equipment, isolation, tagging, testing, securing and earthing where required, safe removal of equipment/ conductors.	Critical
63.	Describe the functioning of basic electronic circuits used in common electrical power circuit applications including related hazards and safety requirements..	Basic theory and measurement. Common applications are motor starters, lighting dimmers, inverters, line conditioners, smoke alarms, backup supplies, etc. Hazards and safety requirements associated with Static Electricity Discharge from components.	
64.	Describe basic control techniques and diagnostic methods for simple DC motor control circuits and applications	Understanding of concepts and basic applications in modern plant systems including motor interlocking safety issues.	
65.	Demonstrate an understanding of the basic operation of various types of luminaires and the purpose of components and ancillary equipment including related hazards and their safety requirements.	HP and LP discharge luminaires, fluorescent luminaires, filament luminaires etc. used in lighting systems together with their respective ancillary equipment and related hazards and safety requirements. Refer to AS/NZS 3000 4.3.6.1.	
66.	Demonstrate the knowledge and skills for diagnosing and rectifying faults in electrical apparatus and associated circuits.	Required for safe working practices with electrical systems and installations. All repairs must be compliant with the relevant standards. This item is crucial as all previous skills are utilised to effectively perform a fault find function.	Critical

Note 1: Under the Capstone Assessment covering the “critical” items, items 57 and 58 are expected to be covered only by a written assessment, although proper practical skill and knowledge will be expected to be developed during the course of training.

(Document issued 1 March 2001)

Elec_Reg_Perf_Reqmts_2001_Final.doc

Attachment 2: AQTF 2007 National Guideline for Managing Non-Compliance

Extract: Categories of (non-)compliance (page 7)

Non-compliance

The requirements of the AQTF 2007 *Essential Standards for Registration* have not been met based on the evidence reviewed. There are three categories of non-compliance.

Minor non-compliance

The requirements of the AQTF 2007 *Essential Standards for Registration* have not been met based on the evidence reviewed but there is no or minor adverse impact on learners and/or other consumers of goods and services produced in the training environment or the current (or future) workplace.

Evidence indicates that:

- non-compliance does not demonstrate a serious breakdown of the RTO's systems for the provision of quality training and assessment
- continuous improvement systems are in place
- data from the quality indicators or other sources shows that clients are generally satisfied with services and outcomes from the RTO.

Significant non-compliance

The requirements of the AQTF 2007 *Essential Standards for Registration* have not been met based on the evidence reviewed and there are indications of a significant adverse impact on learners and/or other consumers of goods and services produced in the training environment or the current (or future) workplace.

Evidence indicates that:

- training and assessment systems are not sufficiently focused on quality training and assessment outcomes and meeting individual learners' needs in some areas of the RTO's operations
- systems to continuously improve the RTO's operations are inadequate
- data from the quality indicators or other sources shows that a range of clients have expressed dissatisfaction with services and outcomes from the RTO
- previously identified minor non-compliance has not been rectified or evidence of improvement within the applicable period has not been provided.

Critical non-compliance

The requirements of the AQTF 2007 *Essential Standards for Registration* have not been met based on the evidence reviewed and a critical adverse impact on learners and/or consumers of goods and services produced in the training environment or the current (or future) workplace is occurring or has occurred.

Evidence indicates that:

- training and assessment systems are not achieving quality training and assessment outcomes and are not meeting individual learners' needs
- there is a breakdown in, or absence of, effective management systems
- there is no systematic approach to continuous improvement
- data from quality indicators or other sources shows that there is widespread or persistent dissatisfaction with services and outcomes.

In extreme situations evidence from audit may indicate risk of injury or death to people in the training environment or the current (or future) workplace. In such instances, the level of risk and potential impact on learners and/or other consumers of goods and services produced in the training environment or the current (or future) workplace warrants immediate rectification.

Attachment 3: Employer survey questionnaire

2012 Employer survey for electrical apprentices in WA

INTRODUCTION

EMPLOYER SURVEY OF TRAINING OF ELECTRICAL APPRENTICES IN WA

The Training Accreditation Council is undertaking an audit of training of apprentices in WA who are seeking an electrical licence. This is an opportunity for you to provide valuable feedback about the training apprentices are receiving and the Capstone assessment.

SURVEY INSTRUCTIONS

You will be taken through the short survey by clicking on the "Next" button below. It should only take a few minutes to complete.

If you would prefer a hard copy of the survey to complete or to provide a verbal response please contact the Project Manager, Olivia Mayo on (08) 9441 1974 or olivia.mayo@des.wa.gov.au

Responses must be received by 13 July 2012. All responses will be kept confidential.

Employer Survey

1. What is the primary area your company covers? [please tick one]

- Electrical - housing/domestic
- Electrical - industrial
- Electrical - commercial
- Electrical transmission & distribution
- Mining and resources
- Construction
- Communication services
- Electrical generation
- Manufacturing
- Other (please specify)

2. Do you currently have electrical apprentices working for you?

- Yes
- No

Your electrical apprentices and their training

2012 Employer survey for electrical apprentices in WA

1. Which qualification(s) are your apprentices studying?

- MEM30405 Certificate III in Engineering Tradesperson – Electrical/Electronic
- UEE30807 Certificate III in Electrotechnology Electrician
- Both
- Unsure
- Other (please specify)

2. How do your apprentices do their training?

[You can select more than one option]

- On-the-job training
- Block release
- Correspondence or online
- RTO visits the employer's premises
- Other (please specify)

3. How satisfied are you with the way the training is offered?

[please tick one]

1 Very dissatisfied 2 Somewhat dissatisfied 3 Neither satisfied or dissatisfied 4 Somewhat satisfied 5 Very satisfied

How satisfied are you with the way the training is offered?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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2012 Employer survey for electrical apprentices in WA

4. How much contact do you have with a representative from the Training Provider/ Registered Training Organisation(s) (RTO)? This can include visits to apprentices onsite or phone calls to discuss current progress.

[Please select one]

- Daily
- Weekly
- Monthly
- Twice yearly
- Yearly
- No contact
- Varies depending on apprentice
- Varies depending on RTO's staff
- Other (please specify)

5. Does the Training Provider/RTO request that you, or another person in your company, verify the evidence of the apprentice's work that is used towards their assessment?

- Yes
- No
- Not applicable

Comment (optional)

Training of electrical apprentices in WA

1. As an employer, how would you rate the overall ability of recently qualified apprentices to understand the requirements of their role and work effectively in industry?

[please tick one]

- Ability exceeds industry requirements
- Ability meets industry requirements
- Ability is below industry requirements

Comment (optional)

2012 Employer survey for electrical apprentices in WA

2. Do you believe apprentices are receiving the full range of training experiences they need during their apprenticeship to prepare them to work in the industry?

Yes
 No

Comment (optional)

3. Which one of the following statements best describes your experience with workers who have recently finished their apprenticeship, passed their Capstone test and have their licence:

The workers are completely work ready and can 'hit the ground running'
 The workers need some minor support to be work ready
 The workers require a lot of additional training or assistance to be work ready

4. How confident are you that the Capstone test is a good indicator that a person should get their electrical licence?
 [please select one]

	1. Very unconfident	2. Somewhat unconfident	3. Neutral	4. Somewhat confident	5. Very confident
How confident are you that the Capstone test is a good indicator that a person should get their electrical licence?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional comments

What other information would you like to contribute about your experience or perceptions as an employer of staff/contractors who have completed training for electrical licensing?

There are comment boxes below for:

- the qualifications or training packages
- Registered Training Organisations
- the electrical licence
- the training system
- suggestions or improvements (related to electrical training in WA)
- general comments (related to electrical training in WA)

[each field is optional]

2012 Employer survey for electrical apprentices in WA

1. The qualifications or training packages

2. Registered Training Organisations

3. The electrical licence

2012 Employer survey for electrical apprentices in WA

4. The training system

5. Suggestions or improvements (related to electrical training in WA)

6. General comments (related to electrical training in WA)

Optional questions about your organisation

This information is only for analytical purposes and will not be used to identify your organisation or responses.

2012 Employer survey for electrical apprentices in WA

1. What is the approximate size is your company?
 [please select up to 2 options]

0-10 employees (include sole operators)
 11-30 employees
 31-50 employees
 more than 51 employees
 and utilises mainly contractors

Comment (optional)

2. Which region is your organisation's head office based?
 [please select one option]

<input type="radio"/> Metropolitan WA	<input type="radio"/> Mid West	<input type="radio"/> New South Wales
<input type="radio"/> Peel	<input type="radio"/> Gascoyne	<input type="radio"/> Victoria
<input type="radio"/> South West	<input type="radio"/> Pilbara	<input type="radio"/> Queensland
<input type="radio"/> Great Southern	<input type="radio"/> Kimberley	<input type="radio"/> Tasmania
<input type="radio"/> Wheatbelt	<input type="radio"/> Northern Territory	<input type="radio"/> Australian Capital Territory
<input type="radio"/> Goldfields-Esperance	<input type="radio"/> South Australia	<input type="radio"/> Overseas

3. Which geographic location(s) does your organisation operate in/service?
 [you may select more than one]

<input type="checkbox"/> Metropolitan WA	<input type="checkbox"/> Mid West	<input type="checkbox"/> New South Wales
<input type="checkbox"/> Peel	<input type="checkbox"/> Gascoyne	<input type="checkbox"/> Victoria
<input type="checkbox"/> South West	<input type="checkbox"/> Pilbara	<input type="checkbox"/> Queensland
<input type="checkbox"/> Great Southern	<input type="checkbox"/> Kimberley	<input type="checkbox"/> Tasmania
<input type="checkbox"/> Wheatbelt	<input type="checkbox"/> Northern Territory	<input type="checkbox"/> Australian Capital Territory
<input type="checkbox"/> Goldfields-Esperance	<input type="checkbox"/> South Australia	<input type="checkbox"/> Overseas

4. How many electrical apprentices does the organisation currently have? (approximately)

5. Which RTO(s) are your organisation's apprentices enrolled with?

State Training Provider/TAFE
 Private Training Organisation
 Unsure
 Both

2012 Employer survey for electrical apprentices in WA

6. What is your job title? (i.e. of the person completing the survey)

Survey Completed

THANK YOU FOR COMPLETING THE SURVEY

The information will be analysed and included in the final report of the Strategic Industry Audit of qualifications which lead to an electrical licence in WA. This report will be published later in the year and will be available on the Training Accreditation Council's website (www.tac.wa.gov.au).

Please contact the TAC Secretariat on (08) 9441 1910 if you have any questions regarding this survey.