

WA Information, Electrotechnology and Utilities Industry



CONTACT DETAILS FOR WA ITAB:

MR BILL ROBERTS
EXECUTIVE OFFICER
WA INFORMATION, ELECTROTECHNOLOGY
AND UTILITIES ITC
SUITE 3, 207 BALCATT A ROAD
BALCATT A WA 6021
PO BOX 597, BALCATT A WA 6914

PH: 9240 2688
FAX: 9240 2930
MOB: 0411 083 845
E-mail: roberts@ieu.com.au
Web: www.ieu.com.au



Department of
Education
and Training

INDUSTRY AREA COVERAGE

INFORMATION, COMMUNICATION TECHNOLOGIES (INFO TECH/TELECOMMUNICATIONS), ELECTROTECHNOLOGY (ELECTRICAL/ELECTRONICS), UTILITIES (ELECTRICITY, GAS, WATER), PRINTING AND GRAPHIC ARTS

GROUP	CLASS	DESCRIPTION
241		Printing & Services to Printing
	2411	Paper Stationery Manufacturing
	2412	Printing
	2413	Services to Printing
242	-	Publishing
	2421	Newspaper Printing or Publishing
	2422	Other Periodical Publishing
	2423	Book and Other Publishing
243	-	Recorded Media Manufacturing & Publishing
	2430	Recorded Media Manufacturing & Publishing
254	-	Other Chemical Product Manufacturing
	2547	Ink Manufacturing
284	-	Electronic Equipment Manufacturing
	2841	Computer & Business Machine Manufacturing
	2842	Telecommunications, Broadcasting and Transceiving Equipment Manufacturing
	2849	Electronic Equipment Manufacturing n.e.c.
361	-	Electricity Supply
	3610	Electricity Supply
362	-	Gas Supply
	3620	Gas Supply
370	-	Water Supply, Sewerage and Drainage Services
	3701	Water Supply
	3702	Sewerage & Draining Services
423	-	Installation Trade Services
	4232	Electrical Services
526	-	Household Equipment Repair Services
	5261	Household Equipment Repair Services (electrical)
711	-	Postal and Courier Services
	7111	Postal Services
712	-	Telecommunication Services
	7120	Telecommunication Services
783	-	Computer Services
	7833	Computer Maintenance Services
	7834	Computer Consultancy Services

- * ANZSIC Group - Australian New Zealand Standard Industrial Classification
 ** n.e.c. - not elsewhere classified

TRAINING PACKAGES

This industry has coverage for the following Training Packages:

Electrotechnology (Electrical/Electronics) – (UTE99)
Electricity Supply Industry – Generation (UTP98)
Electricity Supply Industry – Transmission and Distribution (UTT98)
Information Technology – (ICA05)
Telecommunications – (ICT02)
Lifts – (UTL98)
Printing and Graphic Arts – (ICP05)
Water Industry – (NWP01)
Gas – (UTG98)

ELECTROTECHNOLOGY

Electrotechnology (Electrical/Electronics) (UTE99)

This package encompasses all activities related to electrical services in a building and construction, installation, maintenance and servicing context. Also included is all training related to electronics maintenance, servicing and production, Instrumentation, Refrigeration and Air Conditioning, Data Communications and Remote Area Essential Services.

Electrical as it relates to electrical fitters, maintenance and industrial and mining sites is dealt with through the Metals Package.

Status: Endorsed, with Phase 2 Review underway.

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

Electrotechnology

The industry is dominated by small business operators most of whom operate out of a van and constantly travel from site to site. The activity of the industry is directly linked to the demand cycles of the Building and Construction sector. The businesses require an A Grade Electrical Licence to operate which is now given affect to by completion of the training package qualification and a Capstone Assessment test to meet the requirements of the regulatory authority.

With the advent of changing technology, so are the goods and services of this sector, with the installation of data (smart cabling) and associated technology being installed with electrical components, as one.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

This list is a guide only

- National Electrical and Communications Association (NECA)
- TVW Enterprises
- Western Power
- TV and Electrical Services Association
- Electrical Development Association of WA (EDAWA)
- Electrical Licensing Board
- Office of Energy



LICENSING OR REGULATORY REQUIREMENTS

Electronic Technician/Service (Servicing Televisions)

- National Restricted Electrical licence – Electrical Licensing Board

Electrical Industry

- Electrical Licensing Board of Western Australia

Electrician

- Licence - Office of Energy

Electronics

- Some restricted licensing requirements

WORKSAFE

Regulations as specified under the *Electricity Act 1945* and *Electricity Licensing Regulations 1991* must be adhered to. Further information regarding Energy Safety can be found at <http://www.energysafety.wa.gov.au/default.htm>

TRAINING ENVIRONMENT/ISSUES

Because of the relationship between the Training Package and an Electrical Licence, training has a particularly important role in this industry which is reflected on the assessment infrastructure. This involves an on-the-job electronic data profiling system and additional capstone assessment for licensing purposes.

HIGH RISK TRAINING CONCERNS

This Training Package gives effect to the competencies required by Electrical Licensing Authorities for the issuance of an A Grade Electrical Licence. That the RTO has the capacity to deliver these is critical to the industry.

The Electrotechnology Industry is subject to high level of regulation codes of practice related to the assembly, installation and maintenance of parts, components and the control and operation of equipment and apparatus. State Electricity, Telecommunications, Occupational Health and Safety and Work Cover Acts and Regulations typically cover the Electrotechnology Industry. The Training Package covers a number of qualifications that relate to electrical licensing authority of WA. The Electrical Licensing Board within the Office of Energy (WA) is the regulatory authority for the State and for further.

Assessment to be undertaken by the RTO utilising a workplace assessor who is competent against the assessor competency standards and the relevant industry vocational competencies.

More information on the Electrotechnology Industry Training Package, its qualifications and units of competency can be found on the following website:

<http://www.ntis.gov.au/Default.aspx?/trainingpackage/UTE99>



ELECTRICITY

UTP98 -- Electricity Supply Industry - Generation Training Package - Review Phase Two

Review of Electricity Supply Generation Training Package. Re-development of the Training Package based on the findings and recommendations of the Phase I Scoping review.

UTT98 -- Electricity Supply Industry - Transmission and Distribution Training Package

This Training Package covers those people engaged in the transmission and generation of electricity including sub-station operations.

Status – Endorsed, with Phase 2 Review underway.

UTT98 -- Electricity Supply Industry - Transmission and Distribution Training Package Additions

Additions for Rail Traction sector

Status – Endorsed

UTT98 -- Electricity Supply Industry - Transmission and Distribution Training Package - Review Phase Two

Redevelopment of the Training Package based on the findings of the Phase I review and input from States and Territories. Also to be based on the report on the proposed structure for the Electrotechnology Training Package.

Implementation Kits for Training Packages can be found at the following website:-

<http://www.training.wa.gov.au/training/content-training-packages.asp>

More information on the Electricity Industry Training Packages, qualifications and units of competency can be found on the following websites:

<http://www.ntis.gov.au/Default.aspx?/trainingpackage/UTP98>

<http://www.ntis.gov.au/Default.aspx?/trainingpackage/UTT98>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

Electricity

- Large proportion of workforce is with Western Power.
- Increasing awareness of environmental issues.
- Maintenance people need comprehensive skills in information technology and communications.
- In linework sector, increasing multiskilling in previously separate disciplines of overhead line work, high and low voltage switching, underground cable work.
- Licensing requirements apply.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

This list is a guide only

- Western Power State Network
- ALCOA
- Australian Services Union
- Electrical Trades Union
- Electrical Licensing Board
- Electrical and Communications Association



HIGH RISK TRAINING CONCERNS

Some of the competencies are specific to a particular work environment with which an RTO would need to be regularly involved to effectively deliver.

TRAINING ENVIRONMENT/ISSUES

Level Two and Level Four Traineeships are increasingly being used for specialised training in this sector. Some partnerships between sector companies and TAFE have been founded for the delivery of underpinning skills and knowledge.

The Electrotechnology Industry is subject to high level of regulation codes of practice related to the assembly, installation and maintenance of parts, components and the control and operation of equipment and apparatus. State Electricity, Telecommunications, Occupational Health and Safety and Work Cover Acts and Regulations typically cover the Electrotechnology Industry. The Training Package covers a number of qualifications that relate to electrical licensing authority of WA. The Electrical Licensing Board within the Office of Energy (WA) is the regulatory authority for the State and for further.

Assessment to be undertaken by the RTO utilising a workplace assessor who is competent against the assessor competency standards and the relevant industry vocational competencies.

INFORMATION TECHNOLOGY

Information Technology Training Package (ICA05)

STATUS: endorsed.

More information on the Information Technology Industry Training Package, its qualifications and units of competency can be found on the following websites:

<http://www.ntis.gov.au/Default.aspx?trainingpackage/ICA05>

Implementation Kits for Training Packages can be found at the following website:-

<http://www.training.wa.gov.au/training/content-training-packages.asp>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

The workforce is made up of IT professionals, para professionals, users and individuals requiring specific skills.

The Training Package has been developed with the specific purpose of addressing the needs of each level.

Many of the challenges facing the training system when implementing ICT training are embedded in this sector's current stage of development in this state. These challenges include:

- The need for ICT skills spans virtually all industries, therefore an increasing and ongoing demand for training from the VET sector should be expected.
- New job and niche sectors are rapidly emerging making the marriage of training with business needs critical.
- Having to cater for different consumers of ICT skills requires the training system to cater for multiple training solutions, employment based training being one.
- The major area of growth is in the use of ICT for small/medium enterprises as well as individuals for employment, career and salary purposes. The needs of this group can differ greatly in skill requirement terms from core IT & T industry group who require specialist skills, through to SMEs who are mostly in need of generalist skills. Often, to meet the needs of the workplace, training needs to be an integration of these two things.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

This list is a guide only

- Australian Computing Society
 - Australia Information Industries Association
 - Australian Services Union
 - Chamber of Commerce and Industry
- Department of Industry and Technology



HIGH RISK TRAINING CONCERNS

Whilst the capacity to deliver by the majority of RTOs at Levels Two and Three is high, this diminishes at Levels Four and Five which are the key occupational training levels in place for the development of skills for the Western Australian economy.

It should not be assumed that capacity to deliver at Levels Two and Three translate into capacity to deliver at Levels Three and Four.

TRAINING ENVIRONMENT/ISSUES

The ITAB is currently working across Western Australian industry in this sector to promote the uptake of traineeships, particularly at Level Four, as a means of building the Western Australian Information Technology Skills Pool.

Qualification structure must be maintained so that they reflect the ongoing needs of the sector and respond in a timely manner to changed technologies and circumstances. Assessors are to be conversant with current industry practices the industry in which the training is being undertaken.

In response to the workforce issues, training needs and skill development scenario, a range of formal VET infrastructure and product has been put in place through employment based initiatives and training package development. This in itself also raises some challenges for the training system, as well as ITCs as trustees of training package content, qualifications and assessment and the strategic focus that underpins them. These challenges include:

- Training Package qualifications are relatively new, and are increasingly building industry acceptance. How the flexibility and scope of training packages can be married with employment based training to benefit enterprise growth and development needs to be the subject of sector specific information and assistance.
- Each of the ICT training package qualifications are designed to specifically meet the requirements of a particular job/occupation in the industry with the intended currency being appropriate training and qualification through the mechanism of a traineeship.
For reasons that seem to mostly revolve around levels of funding, numerous public RTOs in this arena are resistant to ICT traineeships and at the same time problematical in shifting from an old classroom/curriculum centric culture into a workplace standards/employment based approach. This mental set has not helped in getting across the value of traineeships for these sectors and a business solutions rather than a “training is good for you” approach needs to be implemented.
- Equally, employment based training such as traineeships has not been part of an ICT culture and the awareness of the advantage for businesses and individual users is low. The culture that prevails within the IT & T industry group is for vendor and university training.



TELECOMMUNICATIONS

Telecommunications Training Package (ICT02)

ICT02 replaces ICT97. An Implementation Kit for the new qualifications has been developed (February 2004).

More information on the Information Telecommunications Industry Training Package, its qualifications and units of competency can be found on the following websites:

<http://www.ntis.gov.au/Default.aspx?/trainingpackage/ICT02>

Implementation Kits for Training Packages can be found at the following website:-

<http://www.training.wa.gov.au/training/content-training-packages.asp>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

In Western Australia, the Telecommunications workforce is engaged in telecommunications cabling, cabling and customer premises equipment, Telecommunications engineering, Telecommunications computer systems, network planning and Call Centre Operations.

The workplace is being heavily influenced by technological change, particularly in terms of convergence with the IT sector. As a result, the technical and professional components of these two industries are now more commonly known across Australia and the World as the Information, Communications Technologies Industry (ICT).


The Cabling sector of the industry is increasingly in a commercial context being subsumed by the electrical contracting sector with smart cabling (electrical and data comms combined) in the one operation. This is reflected in the context of the electrotechnology package.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

Australian Communications Authority (ACA)
Australian Telecommunications Authority
Australian Telecommunications Users Group
CEPU (Communications Division)
Telstra
Optus
Australian Information Industry Association
The National Skills Hub
National Electrical and Communications Association
Office of Information and Communications (WA).

LICENSING OR REGULATORY REQUIREMENTS

Regulation is maintained by the Australian Communications Authority (ACA), which registers rather than licenses operators under a set of principles and guidelines.



A new trainer pathway for Cabler Registration is before ANTA and involves a common pathway for all cohorts, including:

- Novice Cabler
- Partly experienced Cabler
- Experienced Cabler
- Qualified Electrician

For full details on the Cabling Registration regime, Auditors should contact the ITAB on (08) 9240 2688.

HIGH RISK TRAINING CONCERNS

National research has raised considerable concerns about RTO practices in relation to cabling training, these include:

- Inconsistent approach to training by individual RTOs.
- Inappropriate use of competency training pathways.
- Overall quality of delivery, with many RTOs taking short cuts.

TRAINING ENVIRONMENT/ISSUES

Transitional arrangements to cater for regulatory requirements of the Australian Communication Authority (ACA) in translating for the 'licensing' system in cabling (customer premises) to the Cabling Provider Rule.

A registered assessor may be required to obtain advice from the ACA.



LIFT INDUSTRY

Lift Industry Training Package (UTL98)

This Training Package covers the repair and/or maintenance, servicing and major modernisation of lifts, escalators and moving walk systems and a Lift Electrician who assembles, installs, adjusts, maintains and repairs electric and hydraulic freight and passenger lifts and escalators.

Status – Endorsed

More information on the Lifts Industry Training Package, its qualifications and units of competency can be found on the following websites:

<http://www.ntis.gov.au/Default.aspx?trainingpackage/UTL98>

Implementation Kits for Training Packages can be found at the following website:-

<http://www.training.wa.gov.au/training/content-training-packages.asp>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

Workforce involves electricians and electronic tradespersons who specialise in the Lift Industry. Employment is mainly by the large lift companies via apprenticeships.

TRAINING ENVIRONMENT/ISSUES

Training is now given affect by the Electrotechnology Training Package.

Regulatory Requirements – Regulations and codes of practice are based on the principal of operation of lift systems, public safety, safety and health of individuals who work on lift systems and other codes and practices relevant to the environment in which the lift is installed and maintained.

SAA Lift Code – Utilisation of Standards of Australia for the lift industry range of related acts and regulations that specifically apply to the lift industry that are relevant to the State and Territory.



PRINTING AND GRAPHIC ARTS

Printing and Graphic Arts Training Package (ICP05)

The Printing and Graphic Arts Training Package covers the vocational requirements of the industry which includes the sectors of graphics, screen printing, printing and finishing. Qualifications are available at Certificate II, III, IV, Diploma and Advanced Diploma levels.

Status – Endorsed

More information on the Printing and Graphic Arts Training Package, its qualifications and units of competency can be found on the following websites:

<http://www.ntis.gov.au/Default.aspx?trainingpackage/ICP05>

Implementation Kits for Training Packages can be found at the following website:-

<http://www.training.wa.gov.au/training/content-training-packages.asp>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

- Various tradespeople work in the printing and graphic arts industry, including graphic pre-press personnel, printing machinists, print finishing, screen printers, desktop publishing operators.
- Diminishing number of apprentices.
- Strong influence of digital technology, convergence of other information industries, as well as new requirement for information management in the industry, are expected to bring great change in the next 5 years.
- Newspaper production becoming more mechanised and efficient.
- Issues of waste control and quality control important.
- Fierce competition for small Perth market.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

This list is a guide only

- AMWU Print Division (Union)
- Australia Post
- Australian Communications Authority (ACA).
- Australian Information Industries Association (AIIA)
- National Print Managers' Association
- Office of Energy
- Office of Information and Communications (WA) (in Commerce and Trade)
- Printing Industry Association (Employers)
- Screen Printers Association of Australia
- Western Power

LICENSING OR REGULATORY REQUIREMENTS

None.



TRAINING ENVIRONMENT/ISSUES

Printing

- Decline in apprenticeship numbers attributed to increasing technology usage and less labour intensive processes.
- Reporting desire for uptake of Traineeships for entry level industry training.
- Difficulties in small, pressured businesses to allocate time for training. More in-house, on-the-job training seen as desirable.
- Current training providers are seen to need up to date equipment/technology as well as skilled instructors.
- Press area is greatest immediate training priority for employers in WA.
- Business administration including sales and customer service skills, and general management skills including personnel management, are also priorities.
- In the longer term (2-5 years) training needs to include computing skills, technology, pre-press, print machining.
- Managers indicated a personal need for business administration skills.
- VET in schools could work to prepare students for the industry through traineeships, apprenticeships.

HIGH RISK TRAINING CONCERNS

Capacity of public RTO to remain up-to-date with technology and to have comprehensive understanding of the changing industry environment that is heavily reliant upon the use of this technology.



WATER INDUSTRY

Water Training Package (NWP01)

The Water Package encompasses all activities related to Water industry operations involving water quality, supply and waste water (sewerage) across Western Australia.

Status – Endorsed

More information on the Water Training Package, its qualifications and units of competency can be found on the following website:

<http://www.ntis.gov.au/Default.aspx?trainingpackage/NWP01>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

- The workforce is distributed widely across Western Australia.
- The predominant employer is the Water Corporation, as well as several large Metropolitan Contractors. A plethora of regional operations exist, the two major being at Bunbury and Busselton. The majority of the workforce involves low level operatives, some at trades level and various engineering levels.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

Water Corporation
Bunbury Water Board
Busselton Water Board
CEPU
ASU

LICENSING OR REGULATORY REQUIREMENTS

The Office of Water regulation administers a licensing scheme for water service providers and for which the Water Corporation has a 25 year operations licence.

No individual licences are involved, although licensed plumbers are contracted to carry out work for the Water Corporation.

HIGH RISK TRAINING CONCERNS


The Training Package is to some extent specialised and RTOs would need to demonstrate the capacity to effectively deliver.

TRAINING ENVIRONMENT/ISSUES

Whilst a very important infrastructure industry, it does involve thin markets and therefore had little capacity to gain support from the VET system.

The need for training has increased in recent years and the ITAB has worked with the Water Corporation, Regional Authorities and Contractors to increase the uptake of training. As a result, Challenger TAFE is developing the capacity to meet the needs of training at various levels.

Increased employment of Level Two and Three Traineeships, with employment by the Water Corporation and Contractors is a current target and substantially increased numbers can be expected throughout 2004-2006.



Qualification structure must be maintained so that they reflect the ongoing needs of the sector and respond in a timely manner to changed technologies and circumstances. Assessors are to be conversant with current industry practices the industry in which the training is being undertaken.

GAS INDUSTRY

Gas Industry Training Package (UTG98)

This package encompasses all activities related to design, installation, maintenance, service and/or repair of gas.

Status – Endorsed.

More information on the Gas Industry Training Package, its qualifications and units of competency can be found on the following website:

<http://www.ntis.gov.au/Default.aspx?/trainingpackage/UTG98>

WORKFORCE ISSUES, CHARACTERISTICS, ACTIVITIES

- The workforce is distributed widely across Western Australia.
- The predominant employers are contractors to Alinta Gas.
- The majority of the workforce involves low level operatives engaged in a wide variety of activities including constructing and maintaining gas delivery systems, transmission pipelines, LPG and reading gas meters.

INDUSTRY ORGANISATIONS / ASSOCIATIONS

Alinta Gas
CEPU
ASU
Office of Energy.

LICENSING OR REGULATORY REQUIREMENTS

Individual licences are not required, but contractors as providers of gas services are required to be licensed by the Office of Energy.

HIGH RISK TRAINING CONCERNS

Gas industry regulated by State and Territory legislation, and abides by the State/Territory Gas Act which details specific regulations and codes of practice and standards.

- Occupational Health and Safety requirements
- Australian Standards Code and Practice
- Manufacturing specifications
- Environmental requirements
- Enterprise procedures



TRAINING ENVIRONMENT/ISSUES

The ITAB has worked with contractors to increase the uptake of Level Two and Three Traineeships and numbers are on the increase.

Upgrading the skills of existing workers is an industry priority and an increase of this type of training is likely into the near future.

Assessment to be carried out by an industry qualified assessor.

POSTAL INDUSTRY

Postal Services

- Projected decrease in volume due to increased use of electronic communication forms.
- Predominantly in government employment, with large proportion of supervisory and management personnel lacking formal VET qualification.

NATIONAL INDUSTRY TRAINING ADVISORY BODIES

- EE-OZ Utilities Industry Skills Council Ltd

STATE INDUSTRY TRAINING ADVISORY BODIES

- Western Australian Information, Electrotechnology and Utilities Industry Training Council