

Electrical, Utilities and Public Administration Training Council Industry Workforce Development Plan

Plan Details:

Plan Title:	Industry Workforce Development Plan
Issue Details:	Issue # 1, 2012/2013
Approval Authority:	EUPA Training Council Board of Management
Submission Authority:	Electrical, Utilities and Public Administration Training Council Inc.

Approval:

Approval Authority:	Chair of Training Council Board of Management
----------------------------	---

Signature:



Date:	11 April 2013
--------------	---------------

Endorsement:	Department of Training and Workforce Development
---------------------	--

Signature:

Date:	<Insert month, year>
--------------	----------------------

FOREWORD

The **Electrical, Utilities and Public Administration Council (EUPA) Inc** continues to promote Vocational Education and Training as the means to supply industry with highly skilled labour both now and into the future. EUPA has established networks with influential industry peak bodies, industry leaders and associations as well as training providers across its scope of operations to deliver on this outcome.

As was the case in the past twelve months the resources sector will be the most significant economic driver for the state, however EUPA continues to be committed to ensuring the needs of the industries it represents are also recognised by government as essential to state development.

EUPA has an industry coverage which is the foundation for all other sectors of the Western Australian economy. Industry from all corners of the state rely upon the sectors EUPA services to provide social infrastructure, administer government services, build and maintain public utilities, enable power and provide community safety.

Under the direction of the Department of Training and Workforce Development, EUPA has compiled individual industry sector *Environmental Scans* and this 2013 *Workforce Development Plan* in consultation with our stakeholders.

This work continues to inform the Department of matters that impact on the industry sectors EUPA represents and the proposed strategies and actions to be championed by the training council on their behalf. This 2013 Workforce Development Plan is also structured to demonstrate how EUPA will contribute to the strategic goals articulated by the Department in *Skilling WA – A workforce development plan for Western Australia*.

EUPA aims to continue to provide leadership and forward-looking industry advice to government to support the States' economic development and in so doing is proposing strategies to ensure its continued engagement in workforce development and training initiatives for each of its industry sectors.

Joe Fiala

Chairperson
EUPA Training Council

Table of Contents

FOREWORD	2
TABLE OF CONTENTS	3
OVERVIEW	5
Issuing Authority	5
Aim	5
Objectives	5
SECTION 1 EXECUTIVE SUMMARY	6
Industry Sections and Training Packages	6
Electrical	6
Utilities	6
Public Administration	6
Training Packages	7
Workforce Development Issues	7
Population Growth	8
Competition for skilled labour	8
Demand for Energy	8
Climate Change and Environment	8
Technology Development	9
Aging Workforce – Utilities Sector	9
COAG – National Occupational Licensing	9
Local Government Reform	9
EUPA identified issues and recommended Priority Actions	9
Summary of Issues Table	10
SECTION 2 METHODOLOGY	14
Methodology	14
SECTION 3 INDUSTRY PROFILE	16
Overview of the Electrical (Electrotechnology) Industry Sector	16
Industry Analysis	16
Industry Trends	17
Labour and Skill Demand	17
Participation – Gender and Age	18
Regional Impact	19
Regulatory Requirements	19
Major Challenges and Barriers	19
Occupations in Demand	21
Workforce Development Opportunities	22
VET Training Data by Qualification – Enrolments and Completion	23
Overview of the Utilities Industry Sector	27
Industry Analysis	27
Industry Trends	35
Labour and Skill Demand	36
Regional Impact	37
Regulatory Requirements (if applicable)	37
Major Challenges and Barriers	38
New and Emerging Skills	40
Occupations in Demand (ANZSCO Code)	40
Workforce Development Opportunities	41
VET Training Data by Qualification – Enrolments and Completion	43
Overview of the Public Administration Industry Sector	47

Industry Analysis	47
Industry Trends	51
Labour and Skill Demand	54
Regional Impact	54
Regulatory Requirements (if applicable)	55
Gender/ Age Participation	56
Under-represented Groups Participation	57
Summary of Demographic Information	58
Major Challenges and Barriers	59
New and Emerging Skills	61
Occupations in Demand (ANZSCO Code)	61
Workforce Development Opportunities	63
VET Training Data by Qualification – Enrolments and Completion	64
SECTION 4 INDUSTRY ISSUES AND STRATEGIES	68
SECTION 5 RECOMMENDED PRIORITY ACTION PLAN	72
SECTION 6 PLAN ADMINISTRATION	78
Plan Contact	78
Review Requirements and Issue History	78
Distribution List	78
Consultation for this Issue	78
Communications Plan Summary	79
Validation of this Plan	79
SECTION 7 APPENDICES	80
Appendix 1 – Occupational Licensing as at 1 January 2013	80
SECTION 8 LIST OF TABLES	85
SECTION 9 GLOSSARY	86
SECTION 10 OCCUPATIONS IN DEMAND PROFILES	88

Overview

Issuing Authority

This plan is issued under contract between the Department of Training and Workforce Development and the Training Council in accordance with the requirements of Schedule 2 of the Service Agreement and is maintained by the Training Council.

Aim

The aim of the plan is to outline industry workforce development trends, strategies and actions that provide high-level advice to the Department to inform future strategic directions and Skilling WA – A Workforce Development Plan for Western Australia.

Objectives

The objectives of this plan are to provide the Department with:

- a. Profiles for industry portfolios for the Electrical Utilities and Public Administration Training Council as follows:
 - I. Electrical
 - a. Electrotechnology
 - b. Telecommunications
 - II. Utilities
 - a. Electricity Supply:
 - i. Generation
 - ii. Transmission, Distribution and Rail
 - b. Gas Transmission and Distribution
 - c. Waste
 - d. Water
 - III. Public Administration
 - a. Public Sector (State Government)
 - b. Public Safety
 - c. Corrective Services
 - d. Local Government
- b. High-level state and national industry data and forward projections in regards to:
 - I. Economic trends and impacts on workforce planning;
 - II. Current and future labour market modeling consistent with information provided for the development of the State Priority Occupation List (SPOL);
 - III. Regional variations that may affect workforce planning;
 - IV. Training and education including VETiS;
 - V. Industry critical aspects that may impact on future planning.
 - VI. Identification of issues that impact on State Workforce Planning and that inform and are linked to Skilling WA strategies.

These objectives are established so that effective development of workforce planning in regions and at state level can occur.

SECTION 1 EXECUTIVE SUMMARY

Industry Sections and Training Packages

The *Electrical Utilities and Public Administration Training Council* (EUPA) is responsible for industry sectors critical to all other sectors of the Western Australian economy. Industry from all corners of the State rely upon the sectors EUPA represents to provide social infrastructure, administer government services, build and maintain public utilities, enable power and provide community safety. Employing almost 300,000 individuals the industries EUPA represent are critical to the economic development of the State.

Electrical

The Electrical (Electrotechnology) industry sector covers the design, installation and maintenance of electrical and data systems in domestic, commercial and industrial premises. It also encompasses the installation and maintenance of refrigeration and air-conditioning equipment and other electrical and electronic appliances.

The sector is highly regulated and technical in nature where the vast majority of employment occurs in occupations such as Electrical Engineers, Technicians and the Electrotechnology Trades.

As of 30 June 2012 there were almost 45,000 licenses on issue to electrical contractors, electrical trade workers, refrigeration and air-conditioning trade workers and apprentices in training.

While there is a number of larger electrical contracting organizations operating in WA the sector is largely comprised of single operator businesses totaling approximately 700 across the state.

Utilities

The utilities sector comprises electricity and gas supply, waste and water services. It is the smallest sector with some 20,000 people employed in Western Australia.

There is a constant and growing demand for utility services due to population growth however employment is very much affected by the economic cycle, demand and supply factors, industry policies, climate change and longer term trends in the energy industry especially the deregulation of energy markets.

Electricity Supply and Distribution is expected to be the main driver behind employment growth however environmental and sustainability issues are at the forefront of industry development.

The sector is comprised of large state-owned corporations that build, operate and maintain core infrastructure. Large privately owned contractors are also key stakeholders and service providers in this sector where public/private partnerships are not uncommon.

Public Administration

The Public Administration Industry comprises the State Public Sector (inclusive of Public Safety and Corrective Services) and the Local Government sector.

The Western Australia Public Sector is comprised of 180 different departments and agencies and it significantly contributes to the economic development of the State through the direct employment of over 150,000 individuals and the provision of the necessary support services that enable communities to function and grow.

The Public Safety sector includes Police, Fire and Emergency Services and other community safety stakeholders.

EUPA's responsibility in the Corrective Services sector is primarily with Prison and Custodial officers in the States public and private institutions.

The Local Government sector provides important governance, development initiatives and social and economic progress to all Western Australian communities. There are currently 138 local government authorities functioning throughout the State with 1300 elected members and employing over 15,000 FTE (Full Time Equivalent).

Training Packages

EUPA represents the interests of eleven industry sectors within the three main industry groups noted above. Each sector having its own industry training package and these training packages are maintained by four different national industry skills councils as follows.

Industry Sectors	Training Packages
a) Electrotechnology	a) UEE11 Electrotechnology
b) Telecommunications	b) ICA11 Information and Communications Technology*
c) Electricity Generation	c) UEP12 Electricity Generation
d) Electricity Transmission Distribution and Rail	d) UET12 Electricity Transmission, Distribution and Rail
e) Gas Transmission and Distribution	e) UEG11 Gas
f) Waste	f) CPP07 Property Services*
g) Water	g) NWP07 Water
h) Corrective Services	h) CSC12 Correctional Services
i) Local Government	i) LGA04 Local Government
j) Public Administration	j) PSP12 Public Sector
k) Public Safety	k) PUA12 Public Safety
* The primary responsibility for these Training Packages is with other Training Councils	

Table 1 - EUPA Training Council industry sectors and training packages

Workforce Development Issues

Many agencies have made forecasts as to the impact economic development will have on Western Australia over the next decade. EUPA has identified the following workforce development drivers as impacting on the industry sectors it represents as a result of this development and these issues and drivers are evident to some extent in all regions of the State.

- Population Growth
- Competition for Skilled Labour
- Demand for Energy
- Climate Change and Environment
- Technology Development
- Workforce Demographics
- Council of Australian Governments (COAG) – National Occupational Licensing
- Local Government Reform

Population Growth

Western Australia has recorded the highest population growth of all states in Australia and it has been predicted that by 2056 the State's population will be in the order of 4.3 million. As a result the States' workforce has been predicted to grow significantly over the coming years and it is regularly being reported by various commentators that Western Australia will require some 150,000 additional workers by 2017 and that 70,000 of these will be required by 2015.

Some of the impacts population growth will have on the industries EUPA represent include:

- Increased demand for Domestic Housing (Electrical)
- Expansion of Utilities Infrastructure (Electricity, Gas, Water, Waste)
- Demand for Transport Services (Electrified Rail, Signals)
- Increased demand for Public Services (State and Local Government)
- Increased expectations of Public Safety (Police, Emergency Services (Fire & SES) Environment & Conservation)

Competition for skilled labour

The growth in the States resource projects is continuing to place significant demand for skilled labour from the industry sectors EUPA represents, including occupations such as engineers, technicians, electricians, instrumentation, fixed and mobile plant operators, project managers, planners, human resources workers and managers, administrators, inspectors and OHS specialists.

The 2012 State Training Board project - *"Crowding out: competition for skilled labour in WA"* attempts to identify those industry sectors that will be most impacted by the resource projects. This report confirms that all the industry sectors EUPA represents will be impacted in some way by the resources projects.

Demand for Energy

There are a growing number of new businesses and homes connecting to the electricity distribution grid and the average amount of power used per home and business continues to increase. Western Power reports that in the past five years, the amount of power consumed each year has risen by approximately five per cent per annum and its' forecasts suggest this level of growth is set to continue.

In addition to which gas is rapidly becoming an alternate energy fuel source as industry seeks to implement carbon reduction policies through adoption of alternate technologies for energy production.

Energy 2031 – Strategic Energy Initiative outlines the States' Energy Policy and indicates that demand for energy is driving expansion of energy production capabilities:

Affecting: Traditional electricity production (Carbon fuels)
 Electricity transmission and distribution,
 Gas transmission and distribution
 Alternate electrical energy sources – Solar, Wind, Wave, Geo Thermal (Large scale)
 Gas as an energy source for electricity production
 Domestic and Micro energy production – Solar, Wind, Gas

Climate Change and Environment

It is accepted that climate change will significantly impact on the State. As a result Government climate and carbon reduction policy is driving demand for additional workforce capabilities in environmental and sustainability technology applications:

Affecting: Energy Production
 Water Sources and Treatment
 Waste Management
 Environmental Management
 Public Safety (Emergency Services - Fire and SES)

Technology Development

Most technological developments utilise electrotechnology in some form. Current technology developments significantly impacting on the industry sectors EUPA represents include:

- Micro solar, gas and wind electricity generation (including domestic installations) and waste to energy initiatives
- National Broadband Network (infrastructure construction and connectivity)
- Electrical and electronic data and communication technologies
- Rapid changes and adoption of new technologies by all industry sectors generally have an electrical or electronic application.

Aging Workforce – Utilities Sector

The 2011 Census data confirms the State workforce is aging and that the utilities sector in particular will face difficulties in the not too distant future as the great majority of its workforce is greater than fifty-five years of age.

COAG – National Occupational Licensing

COAG initiatives have seen the nation move to adopt National Occupational Licensing. The electrical industry will see new classifications for electrical licenses and processes for license holders to renew their existing license once it expires be introduced in 2013.

Western Australia is yet to pass the necessary legislation required to allow the National Licensing system to be introduced in this State, though preparatory work is being undertaken through the States regulatory arm - Energy Safety and the Electrical Licensing Board.

These reforms see occupational licenses based on the attainment of nationally recognised qualifications. However it has become evident that WA training providers do not currently deliver all the qualifications relevant to the full range of national occupational licenses currently being proposed.

Local Government Reform

The State Government review of Local Government and subsequent recommendations for reform will see amalgamations of some local governments and revisions to metropolitan boundaries. It is most likely that much of this reform will commence in the latter half of 2013 though the impact of these reforms on workforce development in the sector is yet to be quantified.

EUPA identified issues and recommended Priority Actions

The following table provides an indication of the workforce development issues EUPA aims to address with an indication of the priority actions to be implemented. These recommended actions are the basis of the EUPA operations for the next twelve months.

Summary of Issues Table

Issue	Recommended Priority Action(s)	Skilling WA Strategy	Lead Agency	Due Date:
More than 50% of electrical workers licenses on issue in WA are held by electricians not working in their trade and there is anecdotal evidence that suggests the electrical trades are utilized as pre-requisite qualifications to occupations that do not require the individual to utilize their electrician skills.	Seek to undertake a project to determine: <ul style="list-style-type: none"> those industries targeting electricians to fill job roles not requiring electrical skills; the range of occupations licensed electricians seek in preference to their trade; why licensed electricians seek alternate employment opportunities; and what programs could be initiated to attract licensed electricians back to their trade 	3.1.3 4.2.1 4.2.3	DTWD Office of Energy Safety EUPA	December 2013
ANZSCO definitions do not adequately describe job roles in some industry sectors EUPA represents	Identify the job roles from each of the EUPA industry sectors not recognized within the ANZSCO definitions. Engage the respective National Industry Skills Council in formulating a response to the ABS for the inclusion of the identified job role within future edition of the ANZSIC definitions	2.3 2.1.1 2.1.5 3.1.3	EUPA, GSA, EE-Oz	On going 2013
EUPA Training Council linkages to the tertiary sector is at best ad-hoc and ill defined	Identify where the cross over exists for occupations and qualifications relevant to the EUPA industry sectors in the arena Identification of tertiary institutes delivering programs relevant to EUPA industry sectors Establishment of a stakeholder database relevant to the identified professions and tertiary education providers	4.1.2 4.3.5	EUPA	June 2013

Issue	Recommended Priority Action(s)	Skilling WA Strategy	Lead Agency	Due Date:
<p>There are too few Registered Training Organisations servicing the industry sectors EUPA represents especially in regional locations</p> <p>A Gas Distribution Technician apprenticeship was established in 2011 however no RTO has yet committed to delivery of the respective qualification through an apprenticeship pathway</p>	<p>Engage with regional RTOs to build capacity and capability to support those industry sectors EUPA represents.</p> <p>Seek to increase RTO capacity to service the training requirements of the Gas sector apprenticeships</p>	<p>4.1 4.1.3 4.3.1</p>	EUPA – RTO	Through-out 2013
<p>The Public Sector Commission launched its Employment Based Training Strategy in October 2012 – efforts now required grow the number of the apprentices, trainees and cadets employed in the sector</p>	<p>Research and recommend a preferred public sector “Cadetship” model</p> <p>Seek to establish the identified “cadetships” within the EVAC arrangement</p>	<p>1.4 1.1.2 4.1.6</p>	PSC EUPA – STB	June 2013
<p>The Department of Local Government requires Councils to now produce Workforce Development Plans – however effort is required to aggregate the identified needs for the purposes of presenting a complete WFD Plan for the Local Government Sector</p>	<p>Engaged with the Department of Local Government to aggregate the findings of individual Local Government's workforce development plans into a consolidated Workforce Development Plan for the whole of the sector</p>	5.2.5	EUPA, DTWD, Dept of Local Government	Through-out 2013
<p>Volunteers are not recognized within the “Employment” Based training arrangements</p>	<p>Research and quantify the economic and social impact “volunteers” have on the State – relevant to the industry sectors EUPA represents.</p> <p>Engage with DFES and DTWD to commence discussions to identify mechanisms by which volunteers can be recognized for access to funded training</p>	5.2.6	EUPA, DFES, DTWD	Through-out 2013

Issue	Recommended Priority Action(s)	Skilling WA Strategy	Lead Agency	Due Date:
<p>The Strategic Energy Initiative <i>Energy2031</i> seeks to enhance the skills of the State's energy industry workforce to make sure the workforce is well placed to cater to the emerging needs of the industry.</p> <p>Strategies from the Strategic Energy Initiative <i>Energy2031</i> (pg25)</p>	<p>Undertake activities to address the following stated goals of the Strategic Energy Initiative <i>Energy 2031</i>:</p> <p>"Creating partnerships between business, Governments and education institutions to map the current and future skill needs for the energy sector and identify parties best placed to fulfill those needs".</p> <p>"Recognising the training and skills development requirements of the State's energy sector in Government policies and initiatives"</p>	<p>4.1</p> <p>4.1.1</p> <p>4.1.2</p> <p>4.1.3</p>	EUPA – RTOs	Through-out 2013
The Waste sector in WA is not engaged in nationally recognized training arrangements	EUPA seek to enter into a Strategic Partnership with the Waste Authority to undertake workforce development activities with enterprises and so increase the update of nationally recognized training and the industry's' access funded training opportunities	<p>4.2.1</p> <p>4.2.3</p>	EUPA, Waste Authority	On going 2013-14
National Licensing of the Electrical Trades is likely to be introduced in 2013 – Effort required to ensure training providers in WA delivery the requisite qualifications for the proposed licensing outcome	Establish an Electrical Fitters Apprenticeship utilizing the Electrotechnology Training Package qualification in readiness for the implementation of national licensing	<p>3.1.3</p> <p>4.1.1</p> <p>4.1.2</p> <p>4.1.3</p>	EUPA, NECA – STB	June2013
The Training Accreditation Council has recommended that EUPA instigate a project aimed at addressing the quality of RTO processes related to the gathering of workplace evidence for electrical apprentices	Act on the recommendations of the Training Accreditation Council and produce Good Practice Guide to the gathering of Workplace Evidence for RTOs engaged in electrical apprentices training and assessment	4.3	EUPA – TAC	June 2013

Issue	Recommended Priority Action(s)	Skilling WA Strategy	Lead Agency	Due Date:
Government commitments on climate change will require refrigeration and air conditioning workers who are currently licensed to handle (synthetic) refrigerants on stationary refrigeration and air conditioning systems to re-train to equip them to work with natural refrigerants	Engage with the industry, RTOs and the national ISC to secure Workforce Development Funding for the provision of reskilling refrigeration and air conditioning workers in the use of "Natural Refrigerants"	4.3.6	EUPA, Polytechnic West, Industry	June 2013

SECTION 2 METHODOLOGY

Methodology

This 2012/13 Industry Workforce Development Plan was produced by the Electrical, Utilities and Public Administration Training Council Inc. (EUPA) under its service agreement with the Department of Training and Workforce Development (the Department).

This plan is founded on EUPA's research and active participation in workforce planning and development initiatives over the past two years. It has been developed through the application of a number of research and consultation methodologies where EUPA staff members undertook significant desktop research, conducted industry surveys and consulted stakeholders in all regional locations.

EUPA Board members and members of the eight EUPA industry working groups have been consulted to validate the draft plan and ensure occupations in demand reflect current industry requirements.

Intelligence has been gathered through:

- Board Members consultations and reference to industry leaders for consultation
- Industry Working Groups facilitated by EUPA –almost twenty meeting over 2011-2012*
- Regional consultations and regional industry consultation forums
- Website Blog inviting comment from interested stakeholders
- Online Survey and follow up conversations
- Face to Face meetings with industry stakeholders
- Research involving publicly available organizational annual reports, Regional Workforce Development Plans.
- National Industry Skills Councils Environmental Scans from E-Oz Training Standards and Government Skills Australia
- Review of 2011 Census data

**Industry Working Groups have been established as the means for EUPA to provide ongoing industry advice to the Department of Training and Workforce Development and to solicit industry input into these workforce development planning activities.*

Each IWG is chaired by a EUPA Board member and is made up of industry representatives invited to participate in the training councils' consultative processes.

The following are the major stakeholders consulted:

Public Sector Commission (PSC)

The Police Service

Department of Fire and Emergency Services

Department of Local Government

WA Local Government Association (WALGA)

Public Utilities Office

Department of Water

Water Corporation

Western Power

Horizon Power

Verve Energy

Department of Environment and Conservation (Waste Authority)

ATCO Gas

National Electrical Communications Association (NECA)

Unions - Electrical Traders Union (ETU)

Communications, Electrical and Plumbing Union (CEPU)

Australian Services Union (ASU)

Civil Service Association (CSA)

SECTION 3 INDUSTRY PROFILE

Industry profiles are provided for each of the three main industry sectors EUPA represents:

Overview of the Electrical (Electrotechnology) Industry Sector

Industry Analysis

The Electrotechnology industry covers the design, installation and maintenance of electrical, data and telecommunications systems in domestic, commercial and industrial premises. It also encompasses the installation and maintenance of refrigeration and air-conditioning equipment and other electrical and electronic appliances. The industry is characterised by micro-businesses (approximately 700 across the state), however there are many medium to large electrical contracting organisations that employ significant numbers of electrical engineers, technicians and electricians.

Electrotechnology skills are employed in the building and construction sector and the resource/mineral processing sector where specialisations such as "data and telecommunications", "instrumentation" and "hazardous areas" are seen as necessary to gain employment.

The following occupations fall within the scope of EUPA coverage:

- Electrician and Electrician Special Class
- Electrical Fitter (non-domestic or commercial installations or repair only)
- Refrigeration and Airconditioning Technician
- Electrical Engineer, Technician and Draftsperson.
- Telecommunications Technician

The major industry stakeholders are:

- Department of Commerce – Energy Safety
- Electrical Licensing Board (ELB)
- Communications Electrical Plumbers Union (CEPU)
- National Electrical and Communication Association (NECA)
- Master Electricians
- National Occupational Licensing Authority (NOLA)
- Energy Skills Australia - E-Oz Industry Skills Council

The electrotechnology sector is highly regulated where tradespersons must obtain an electrical workers license so as to work within the sector. The Department of Commerce through the Office of Energy Safety maintains the States electrical workers licensing system.

The Office of Energy Safety indicates that as at 30 June 2012 there were:

- 4397 licensed electrical contractors currently registered in WA, of which it is estimated that some fifty percent are active.
- 30384 electrical workers licenses on issue which is inclusive of 1252 electricians licensed to undertake "Electrical Fitting Work Only".
- 4059 electrical training licenses issued to indentured apprentices
- 420 electrical training licenses issued to pre-apprentices
- 3539 restricted electrical licenses issued - of which 2338 are issued to those that install Refrigeration and Air-conditioning equipment.

In addition those that install Refrigeration and Air-conditioning equipment must also hold a license to handle fluorocarbon refrigerants. The number for people licensed to work with fluorocarbon refrigerants in WA is almost 3000 individuals (includes almost 500 trainees) with full Refrigeration and Air Conditioning endorsement and almost 1000 individuals (includes almost 100 trainees) with split system installation endorsement. (*The Engineering and Automotive Training Council reports on this occupation*)

Industry Trends

The electrical and telecommunication sector continues to experience strong growth as technology development in all industry sectors is placing increasing reliance on electrical, electronic or data communications control systems which in turn is creating employment opportunities for those with relevant skills and qualifications.

Whilst the residential construction sector activity currently fluctuates at fairly low levels, electrotechnology workers are in demand due to continued opportunities in the resources sector. This is particularly true for tradespersons and those with specialisations such as data communications, instrumentation and hazardous areas skills.

The sector comprises a large number of micro businesses (contractors) where workforce planning generally does not occur beyond current project operational needs. It is in this regard that the smaller contracting organisations continue to experience pressure from the resources companies in not being able to attract or retain skilled labour as they are unable to compete on wages and conditions.

It is also becoming apparent that some resource companies seek to recruit electricians due to their trade training having developed skills and attributes which are very much aligned to process control operational roles.

The roll out of the National Broadband Network while somewhat slow in this State is starting to provide opportunities for those involved in telecommunication cabling (ICT – Training package). It is not a requirement that those engaged to work on the NBN be electricians however telecommunications and data communications are specializations that many electricians undertake. (*Refer to FutureNow as the lead training council of the ITC sector.*)

Labour and Skill Demand

Labour force data indicates that the number of electricians working in WA almost doubled in the past ten year period. While the Office of Energy Safety data indicates that in the last 12 months alone the increase in licenses issued nears 10%. Despite this increase the Electrician trade has been on the skills shortage list for 13 of the past 22 years and 10 of the past 12 years.

Office of Energy data also indicates that some 30,384 electrical workers licenses are on issue (30 June 2012) which is inclusive of 1252 electricians licensed to undertake "Electrical Fitting Work Only". It should be noted however that ABS 2011 census data indicates that that some 14,749 individuals identified themselves as electricians on census night 2011.

While correlation between the dates of the data sources is somewhat skewed these figures do however indicate that over 50% of electrical workers license holders in WA do not identify themselves as electricians for the purposes of their primary employment.

Labour force data also indicates that there has also been a threefold increase in the number of Electrical Engineers working in WA over the same ten year period. Likewise the numbers of Electrical Draftspersons and Technicians more than doubled in the same timeframe.

Attraction and Entry to the sector

Attraction to the electrical occupations and in particular the trades is not considered to be an issue as entry into electrotechnology apprenticeships is the most competitive of all apprenticeships and the completion rates of these apprenticeships is high (62% nationally). It is normal for applications to far outstrip available places as is also the case with those that seek a place on an electrical pre-apprenticeship program.

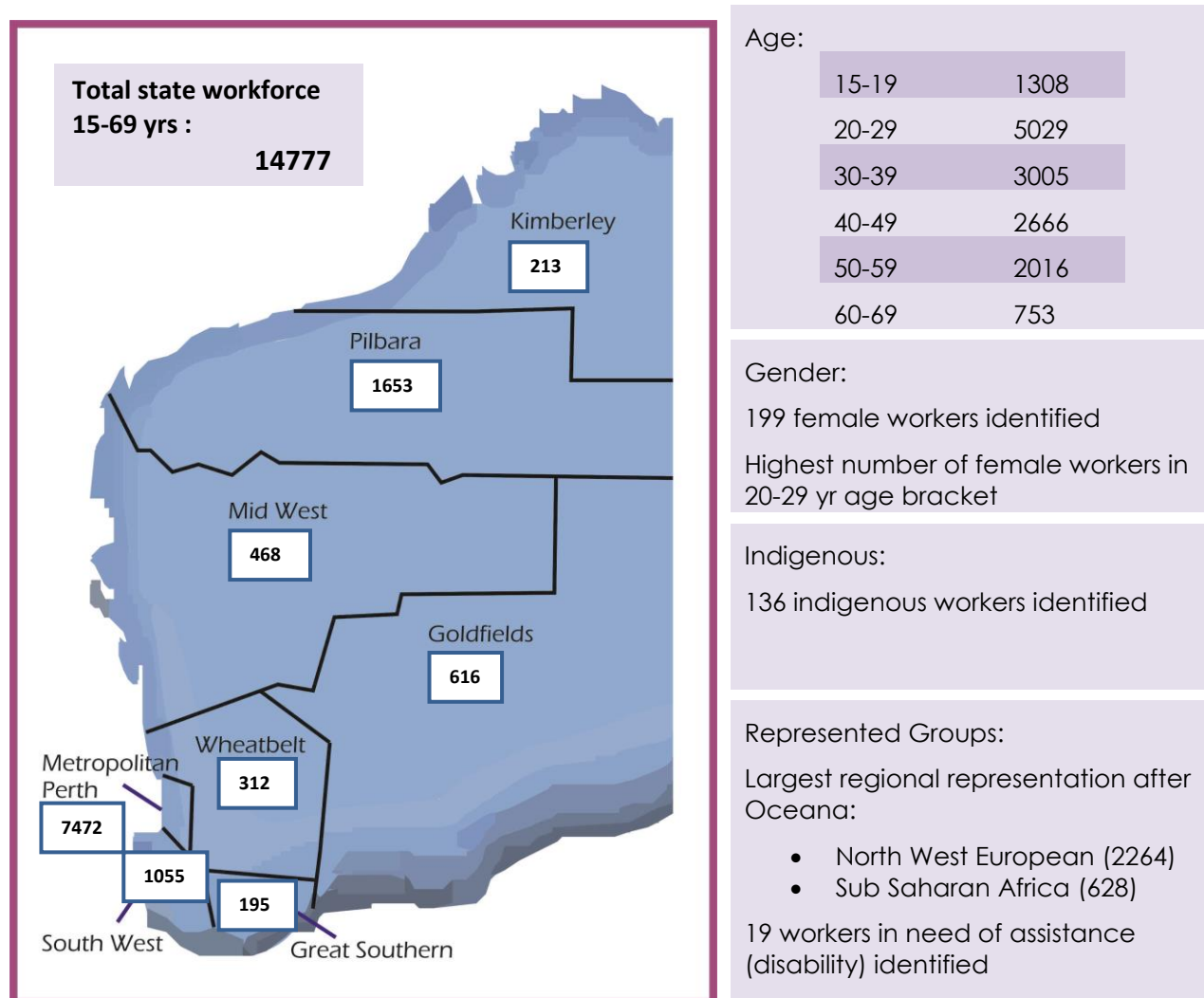
It has become the norm for employers to draw their new apprentices from those who have completed an electrical pre-apprenticeship where the individual's capabilities are assessed prior to employment. Whilst recognising that this is a valuable employment pathway, this preference limits opportunities for those that cannot commit to a period of little to no income to gain employment as an electrician.

Participation – Gender and Age

The electrotechnology workforce remains predominantly male – a common attribute of the traditional trades. It is evident that there is a significant opportunity to grow female employment and increase participation in either full time or part time work.

As can be seen from the following the electrician workforce follows general patterns associated with the ageing of the population and given the physical nature of work the industry experiences an exodus of skilled labour as workers age. However it should be noted that more than half of all electricians fall within the 20yrs to 39 yrs age bracket indicating that this sector is not so concerned with the prospect of an aging workforce.

Figure 1 - Census Data 2011 - for the 'Electrician' Occupation



Australian Bureau of Statistics 2011, Western Australia viewed 5 March 2013,

<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

Regional Impact

As can be seen from the above electrical tradespersons are well distributed across all regions of the State however in reviewing the available Regional Workforce Development Plans each indicates that electricians are among the identified critical occupations.

Regulatory Requirements

Due to safety and environmental risks occupations in the electrotechnology industry are highly regulated and many need a license to operate.

Appendix 1... contains a detailed summary of licensing as it applies to occupations within the Electrotechnology sector.

Major Challenges and Barriers

Population Growth:

Population growth throughout Western Australia is predicted to be sustained over the long term and be significant over the shorter term in response to the demand for labour generated through the resources sector. Whilst the domestic construction sector is currently seeing some early indications of growth, the States' population is predicted to more than double to some 4.5 million people by 2050. Therefore, housing construction will be expected to increase over the longer term creating greater opportunities for the electrotechnology trades.

In addition an expected 90 percent of new homes will be air-conditioned causing an increase in demand for individuals with the skills and the requisite licenses to install new air conditioning units. Further, as the issue of energy efficiency becomes more prominent, ageing high energy consumption units in existing properties will progressively be renewed, so adding to the demand for skilled labour.

COAG – National Occupational Licensing

COAG initiatives have seen the nation move to adopt National Occupational Licensing. As a result the electrical industry will see new classifications for electrical licenses and processes for license holders to renew their existing license once it expires. It is planned for these reforms to be introduced in 2013.

Western Australia is yet to pass the necessary legislation required to allow the National Licensing system to be introduced in this State, though preparatory work is being undertaken through the States regulatory arm – the Office of Energy Safety and the Electrical Licensing Board.

These reforms see occupational licenses based on the attainment of nationally recognised qualifications. However it has become evident that WA training providers do not currently deliver all the qualifications relevant to the full range of national occupational licenses currently being proposed.

The National Occupational Licensing Authority (NOLA) released a discussion paper on the then imminent implementation of National Occupational Licenses (July 2012). In support of which NOLA conducted consultation forums in all States and Territories throughout August and September. Approximately one hundred industry representatives attended the Perth forum.

Proposed classes of Licenses

- Electrician
- Electrical Fitter
- Electrical Lineworker
- Electrical Cable Jointer
- Provisional licenses for overseas trained workers and electrical fitters seeking to move to an electrician license
- Contractor license for each category above (except provisional)

Restricted Electrical Licenses:

Restricted Electrical **with** Fault Finding:

- Refrigeration and Air-conditioning
- Electronics and Communications
- Instrumentation

Restricted Electrical **without** Fault Finding

- Appliances
- Industrial/Commercial Equipment

The introduction of a national license will require some transitions for industry. Further, training providers will need to be prepared to deliver qualifications through apprenticeship arrangements that were previously not recognized in Western Australia. For example not all qualifications that will lead to an electrical fitter license are delivered in Western Australia.

Competition for Skilled Labour:

Despite the ability of the industry to attract new entrants, demand for electrical engineers, electricians and electrical fitters is predicted to be significant for the foreseeable future as skills and labour shortages will be experienced due to technology developments and by many industry sectors competing for tradespersons with the same skill sets, that is:

- Resources, mining and mineral processing
- Gas and Petroleum extraction and processing
- Energy production (electricity supply)
- Telecommunications - National Broadband Network Project
- Construction both Domestic and Commercial

The current practice employed by the mineral processing sector to initially employ electricians and then train them as process operators continues to place great stress on other sectors that require electricians to function.

In addition to which risk management strategies of some resource companies require all their electrical trade workers to be “electricians” where it would be more appropriate to employ electrical fitters is causing something of a mismatch in training effort. That is WA trains and licenses many individuals as electricians for reasons other than available employment opportunities as “electricians”.

Climate Change and Environment:

Government climate and carbon reduction policy continues to drive demand for additional workforce capabilities in environmental and sustainability technology applications in electrotechnology occupations to apply their skills in green technologies such as design and installation of grid-connected photovoltaic cells, application of small scale wind energy systems, installation of green monitoring tools such as smart metering kits, co-generation with auxiliary green sources, domestic and commercial and energy efficiency management and auditing

The challenges here are twofold – ensuring new entrants to the industry are suitably qualified for the new occupations and secondly ensuring the current workforce is able to adapt to the new technologies and systems of work.

Job roles are changing due to environmental pressures and government policy, with the likelihood that demands for new qualifications and skills sets will evolve for employees in areas not yet envisaged - in renewable and sustainable technologies.

Rapid advances and adoption by the community of new technologies requires the electrotechnology workforce to engage in continued development of technical expertise to meet expectations in areas such as:

- Design and installation of grid connected photovoltaic (solar) systems
- Post Trade specialisations and potential for dual trade apprenticeships – electrician / instrumentation and electricians with hazardous areas skills
- Domestic and commercial / industrial 'integrated energy management systems'
- Installation of smart metering systems
- Energy efficiency management and auditing
- Wind energy systems
- Co-generation and local generation
- Telecommunications developments such as the National Broadband Network
- Natural Refrigerants*

* Refrigeration and airconditioning workers who are currently licensed to handle synthetic refrigerants on stationary refrigeration and air conditioning systems will need to re-train to equip them to work with natural refrigerants.

Occupations in Demand

Rapidly emerging skills gaps are occurring across the WA economy, notably in technical, professional and managerial categories. Demand for skilled labour from the electrical sector is significant for occupations such as engineers, technicians and tradespeople to apply those skills in other sectors such as:

- Resources, mining and mineral processing
- Gas and Petroleum extraction and processing
- National Broadband Network Project

Occupations in Demand		
ANZSCO	Occupation	Summary
233311	Electrical engineer	There has been a significant increase in the number of Electrical Engineers, Draftspersons and Technicians working in WA over the past ten years.
312311	Electrical Draftspersons and Technicians	
341111	Electrician (general)	341111 Electrician (general) is inclusive of the separate trades of "Electrician" and "Electrical Fitter" The Office of Energy indicates that as at 30 June 2012 there were 30,384 electrical workers licenses on issue which is inclusive of 1,252 electricians licensed to undertake "Electrical Fitting Work Only". (Electrical Fitting means non-domestic or commercial installations or repair). This figure represents an 11.6% increase over 2010 – 2011 where 27,219 Electrician, including Electrical Fitters licenses were on issue.
341112	Electrician Special Class	High demand is due to major resource and energy infrastructure projects recruiting electricians with instrumentation, or data communications expertise. In addition the roll out of the NBN will see demand for electricians with data communications or telecommunications capabilities.

Table 2 - Occupations in Demand for Electrical

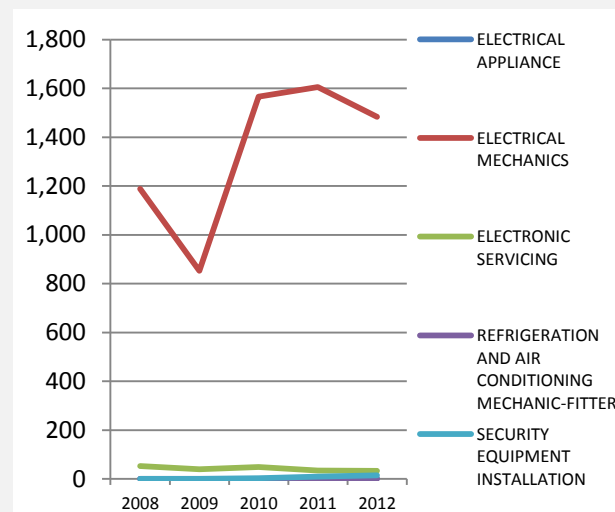
Workforce Development Opportunities

- It is evident that the demand for electricians to support the resource projects cannot be satisfied through current apprenticeship training arrangements and skilled migration through various forms of entry visas will be the only way to satisfy industry needs for skilled labour.
- By comparing the number of electrical workers licenses issued and the number of new tradespersons graduating from their apprenticeships it is clear that migration is already a clear workforce development strategy.
- Census data indicates that there are a significant number of licensed electricians/contractors who are not employed in the electrotechnology field.
- National licensing of the Electrical Trades is likely to be introduced in 2013. Effort is required to ensure training providers in WA deliver the requisite qualifications for the proposed licensing outcome.
- The Training Accreditation Council has recommended that EUPA instigate a project aimed at addressing the quality of RTO processes related to the gathering of workplace evidence for electrical apprentices.
- Government commitments on climate change will require refrigeration and airconditioning workers who are currently licensed to handle synthetic refrigerants on stationary refrigeration and air conditioning systems to re-train to equip them to work with natural refrigerants.
- Advice to migrant electricians on the States processes for issuing an electrical workers license are not well promoted or easily understood by applicants.

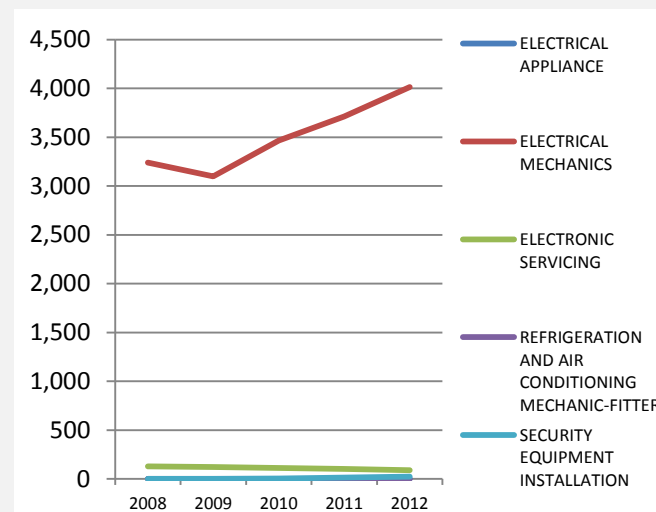
VET Training Data by Qualification – Enrolments and Completion

Figure 2 - VET Data Electrical Apprenticeships

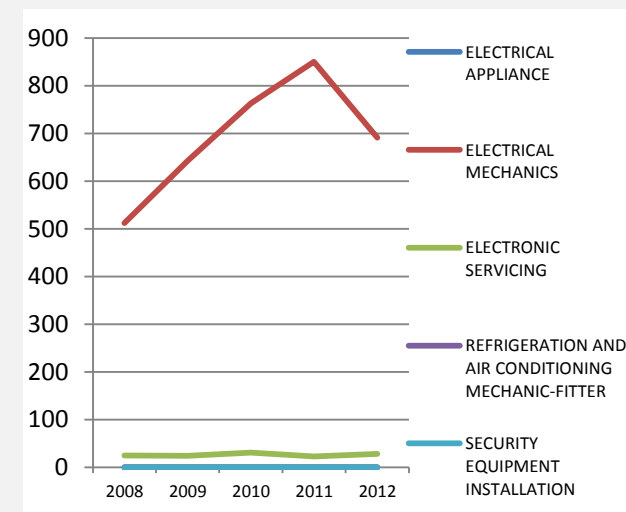
Commencements



In Training



Completions



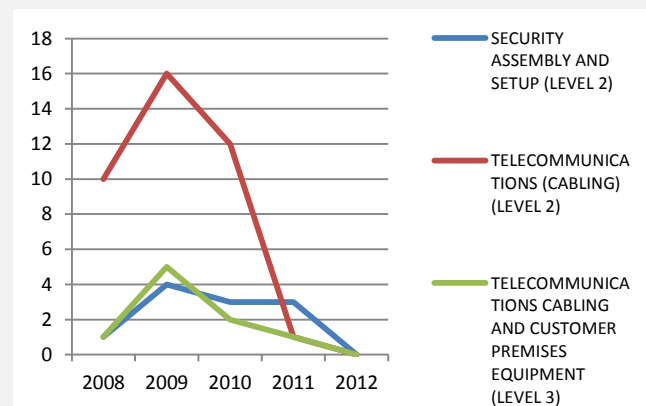
Apprentice numbers in the Electrical Trades continue to be extremely strong. Noting that over 4000 are currently in training.

The fall in completion rates (2012) coincides with the lower commencement rate of 2009 which occurred as a consequence of the global financial crisis of 2008. This fall in completions has been expected and reported in past iterations of the industry workforce development plan.

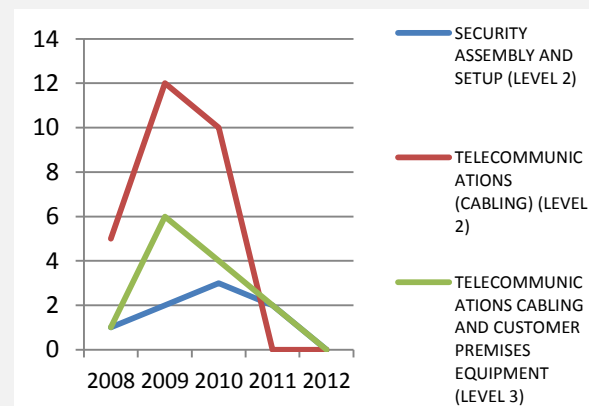
The continuing high numbers of electrical apprentices is placing great demand of training providers in terms of staffing, facilities and resources. Almost all RTos delivering electrotechnology apprenticeship qualifications report difficulties in attracting and retaining suitable qualified trainers and assessors.

Electronics and Telecommunications Industry

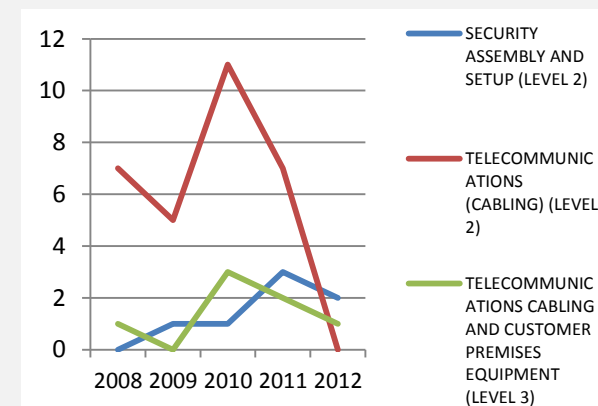
Commencements



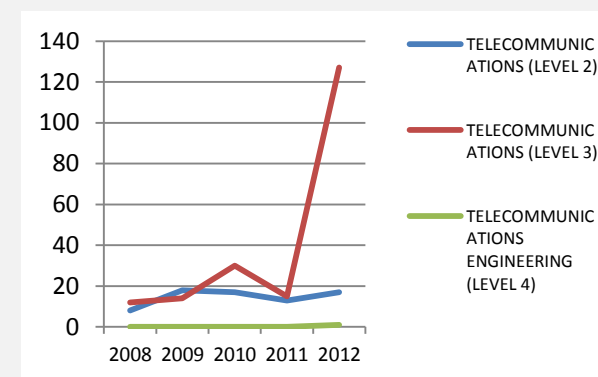
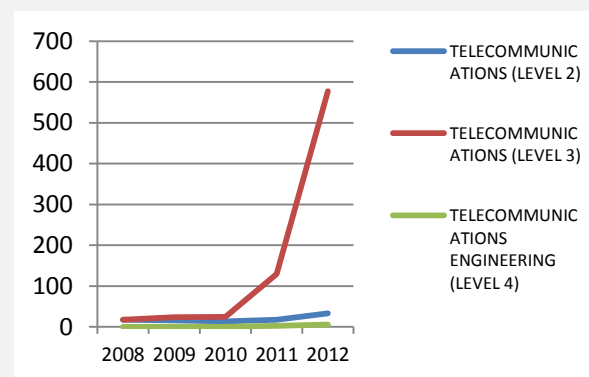
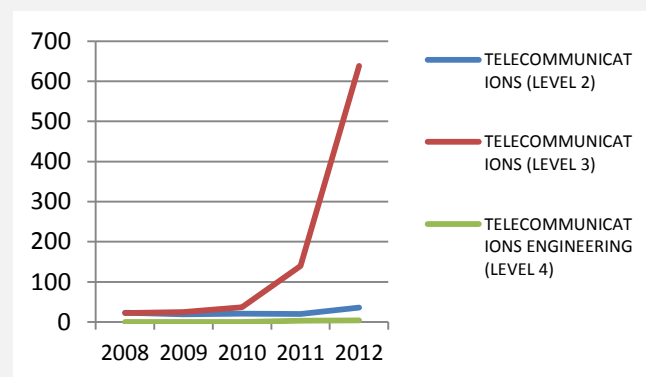
In Training



Completions

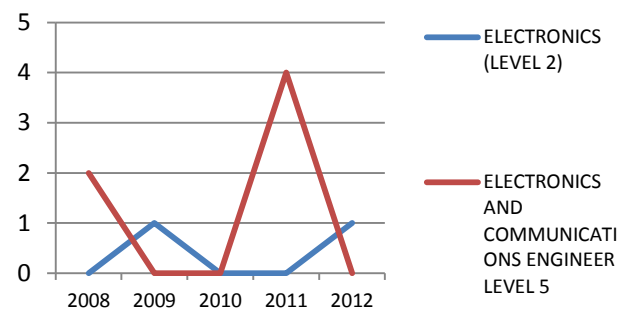


With the NBN stating its preference for ICT qualifications enrollments in UEE qualification related traineeships has declined – see following

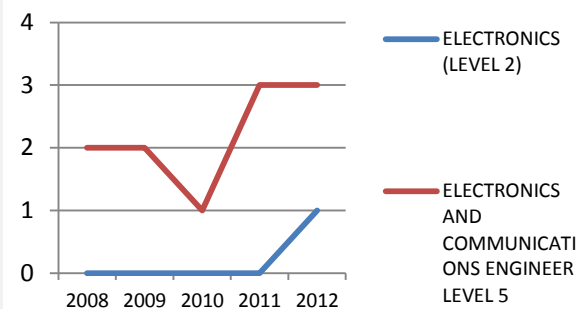


There are now growing numbers entering traineeships related to telecommunications (ICT) in preparation for opportunities created by the NBN. These traineeships utilise qualifications from the ICT training package – (refer FutureNow)

Commencements



In Training



Completions

Nil

There are a limited number of Traineeships available to the industry particularly related to electronics, appliance servicing and business machine servicing. There continues to be limited numbers of people taking up these qualifications

Training Effort in the Electrical Sector

Pre-Employment

The only pre-employment training program (electrical) available to the industry is the pre-apprenticeship which is based on the Certificate II in Electrotechnology career start with an additional three units of competence and a minimum 200hrs structured work placement. Those who have then completed the first year off the job training of the apprenticeship and are eligible for a three month reduction in nominal indenture period.

It is the norm for employers to recruit their apprentices from the pool of graduating preapprentices. In 2012 there were some 420 individuals that completed an electrical pre-apprenticeship.

Apprenticeships and Traineeships

There are currently seventeen different electrotechnology training package Certificate III qualifications currently established as apprenticeships in this State however as can be seen from the above there are commencements recorded in only four of these qualifications and that the single record for the fifth (refrigeration and air-conditioning) was later changed to the engineering training package equivalent qualification. This would seem to indicate industry is still not aware of the full range of qualifications it has available as apprenticeships.

WA is yet to establish the UEE33011 Certificate III in Electrical Fitting as an apprenticeship which is the case in other jurisdictions.

VETis

The apprenticeships and traineeships noted above are all available through a VET in schools arrangement. However the pre-apprenticeship option is by far the most popular given the stated industry preference as a pre-requisite to employment. Numbers are included in those quoted above.

The Certificate II in Electrotechnology Career Start is utilized to some extent as a VETis option though indications are that enrolments are not significant.

Other VET related issues:

TAC Strategic Audit 2012 – RTO electrical delivery

The Training Accreditation Council (TAC) completed a strategic audit of RTOs delivering training and assessment services to the sector in the latter part of 2012. The audit report drew attention to RTOs facilities, resources and staffing. A specific recommendation of the audit relevant to EUPA is the development of a "good practice guide" to advise RTOs on how to improve their approach to the gathering of workplace evidence of apprentice performance.

Alternate Apprenticeship Training Model

E-Oz Energy Skills Australia is piloting a holistic progression management system for electrical apprentices which commenced nationally in 2013. The program is focused on recognising the individual skills and knowledge of each apprentice at every stage as they progress through their apprenticeship. Industry mentors provide support services tailored to an individual's learning needs, boosting each apprentice's capacity to complete their training program.

This program may provide the basis for some future reform to the traditional apprenticeship training model.

Overview of the Utilities Industry Sector

Industry Analysis

The utilities industry is comprised of four separate industries that are summarized separately:

- Electricity Supply
 - Generation, Transmission and Distribution, Electrified Rail
- Gas Transmission and Distribution
- Waste
- Water

Electricity Supply - Generation

The electricity generation sector has both public and privately owned power stations that utilise fossil fuels (coal and gas) or renewable sources of power such as wind, solar, geo-thermal, hydroelectric and biomass combustion to produce the State's electricity needs.

The main activities of the industry are the operation and maintenance, diagnosis and repair of electricity production plant and equipment in relation to:

- large coal or gas fired steam generation plant
- smaller gas fired steam turbine cogeneration plant
- diesel fired internal combustion engine driven generation plant
- hydro generation plant
- wind driven generation plant.
- solar energy plant

Electricity generation stations utilise non-renewable fuel sources such as coal, gas or distillate of various capacities (and stages of construction) throughout the state. These are operated by energy supply organisations, mine sites and mineral and resource processing plant.

In addition to which there is a growing network of electricity generation stations that utilise renewable fuel sources such as wind, biomass, hydro and landfill gas. (again at various stages of construction)

Western Power report that in the past five years, the amount of power consumed each year has risen by approximately five per cent per annum as industry and a growing number of new businesses and homes are connecting to the grid and the average amount of power used per home has increased. Western Power's forecasts suggest this level of growth is set to continue.

Significant new generation plant (fossil and renewable) has been approved for construction or is in the process of seeking approval for construction.

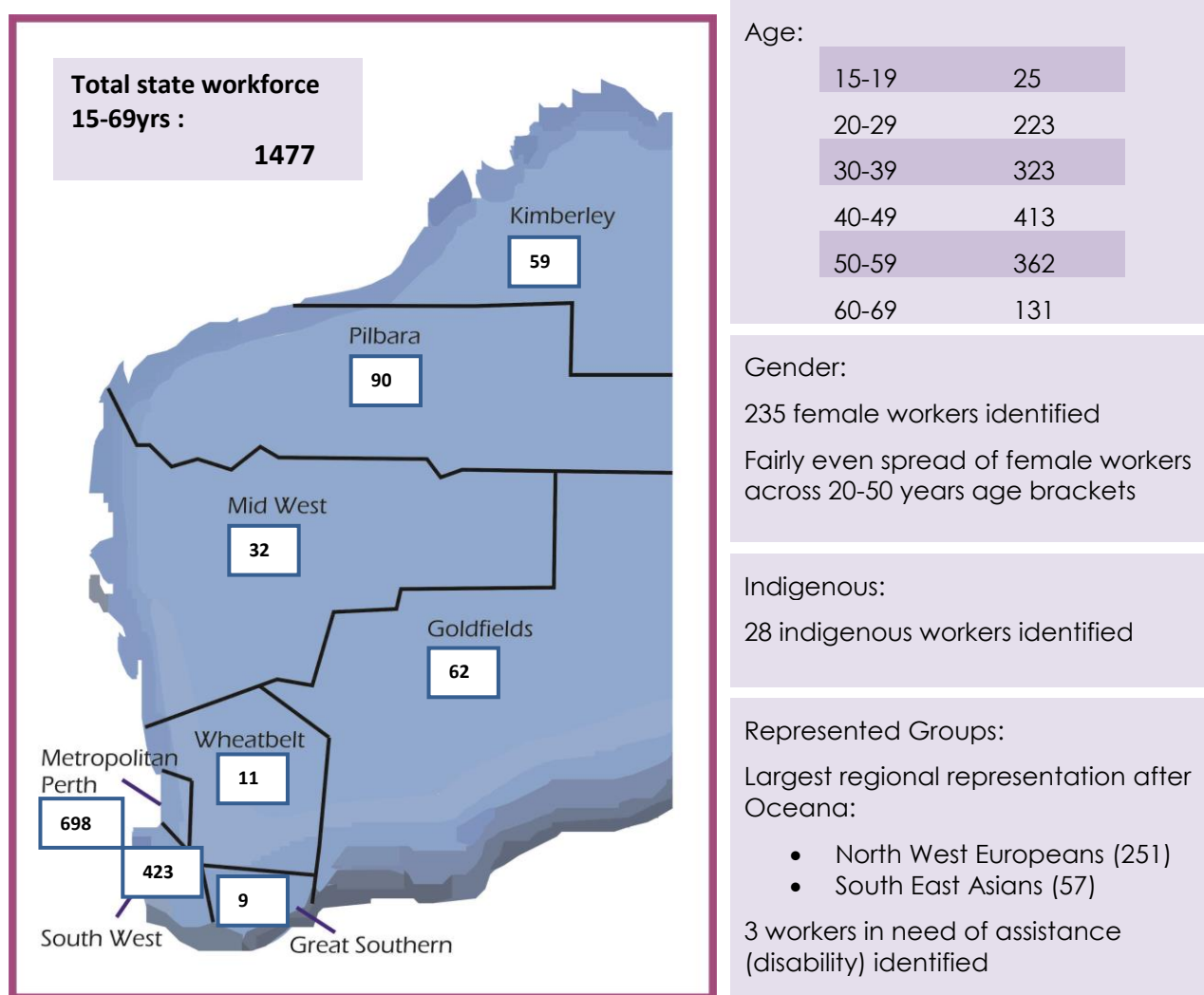
The Public Utilities Office indicates that there are some eighty-five (85) electricity generation stations that utilise non-renewable fuel sources and that there are twenty-nine (29) electricity generation stations that utilise renewable fuel sources.

Participation – Gender and Age

The electricity supply generation workforce remains predominantly male and while that there is opportunity to grow female employment there is currently a strong female representation in the industry.

As can be seen from the following the generation workforce is aging with well over 50% of the workforce in the over 40 year age bracket.

Figure 3 - Statistical Data for the 'Electricity Generation'



Australian Bureau of Statistics 2011; Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

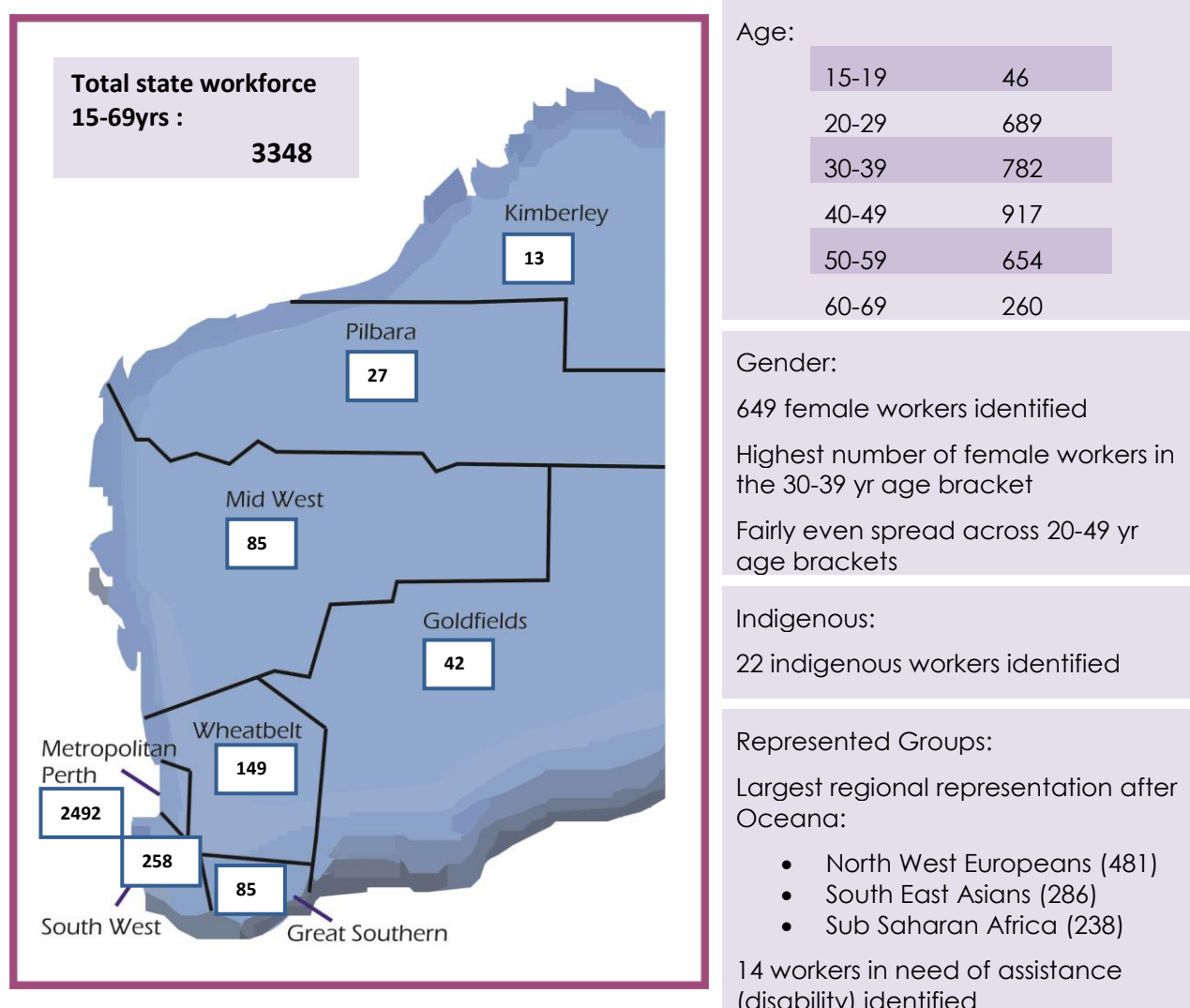
Electricity Supply - Transmission and Distribution

This industry sector covers the transmission and distribution of electricity via overhead and underground lines; cable-jointing, and rail traction.

Workers in this industry sector may be involved in a wide range of tasks, including, installation, maintenance, servicing, commissioning, network protection, network operation, management, planning and vegetation control.

Western Australia's electricity networks include the South West Interconnected System, North West Interconnected System, Esperance System, and Electricity Supply Authorities supplying some regional towns.

Figure 4 - Statistical Data for the Electricity Transmission and Distribution



Australian Bureau of Statistics 2011; Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

Electrified Rail (Taken from the PTA website)

EUPAs interest in the Rail sector is primarily related to the utilisation of electrotechnology occupations that employed in the construction, maintenance and operation of the metropolitan electrified rail system and to a lesser extent where these occupations are utilized on other rail infrastructure.

The Public Transport Authority (PTA) operates four major service systems in Western Australia. One of which is the Network Infrastructure Division which is responsible for managing and maintaining WA's metropolitan railway infrastructure, and for protecting the long-term viability of the State's freight rail corridor and infrastructure. The division's works include:

- Signal and crossing maintenance;
- Resleeper and ballasting tracks;
- Upgrading and improving accessibility of station facilities;
- Planning and constructing expansion of the rail network; and
- Property management.

The PTA owns and operates a rail network of more than 173km and a fleet of 198 railcars. In addition to which major expansion work is proposed together with the introduction of a light rail network.

The occupations of significance to EUPA are the cantenary lineworkers, signals technicians and rail communications.

Future technology developments in this sector that relate to driverless trains will no doubt require the application of instrumentation, telecommunication and data communication expertise.

Gas

The term “gas” in the context of the Utilities industry’ refers to the sector which supplies natural gas via transmission and distribution pipelines, and Liquid Petroleum Gas (LPG), via cylinders, to a variety of domestic, commercial and industrial customers.

Employment in the industry may involve design of transmission, distribution, processing and/or storage systems; construction and maintenance of the systems; commissioning and decommissioning of the above systems; metering and billing of customers.

In West Australia, there are twenty eight gas pipelines (Distribution networks), being some 7,666km in total length and owned by a total of thirteen different organisations. However the four major natural gas transmission pipelines supplying the Western Australian gas market are:

- Dampier to Bunbury Natural Gas Pipeline (DBNGP) extends almost 1600km from the Pilbara region to the South-West of Western Australia. The DBNGP employs approximately 200 people.
- Goldfields Gas Pipeline (GGP) is the second longest pipeline in Western Australia, (1380 kilometers) it services a number of mines between Yarraloola in the Pilbara and Kambalda along with the township of Kalgoorlie. The Goldfields Gas Pipeline employs approximately 100-150 people.
- Parmelia Pipeline (416km) Parmelia Pipeline, transports gas from various fields in the Perth Basin to industrial customers in the Perth metropolitan area and the South West Pilbara Energy Pipeline - from Dampier to Port Hedland.
- Pilbara Energy Pipeline transports gas from the North West Shelf area to Port Hedland

Other major transmission pipelines include the Kambalda to Esperance Gas Pipeline, the Mid West Pipeline and the Telfer Gas Pipeline

The gas reticulation networks (owned by ATCO Gas) serve Geraldton, Kalgoorlie, Albany, Bunbury, Busselton, Harvey, Pinjarra, Brunswick Junction, Capel and the Perth greater metropolitan area including Mandurah. These combined networks cover approximately 13,300km, connecting about 667,000 end users to natural gas and LPG. (ATCO Gas Web site)

The advent of the major gas resources projects commencing over the next few years will place significant pressures of the gas transmission and distribution sector in the retention of skilled staff and its ability to compete in attraction of new workers.

Furthermore, the Gas industry is a major supplier of energy to Australian homes and factories, supplying around 30% of industry energy needs and 20% of domestic needs. Gas has the potential to be a transitional fuel to help meet Australia's growing energy needs until renewable energy and clean coal technologies become more widely available. Government policies are likely to accelerate the implementation of natural gas technologies, which have lower carbon emissions than other fossil fuels.

Natural Gas Usage

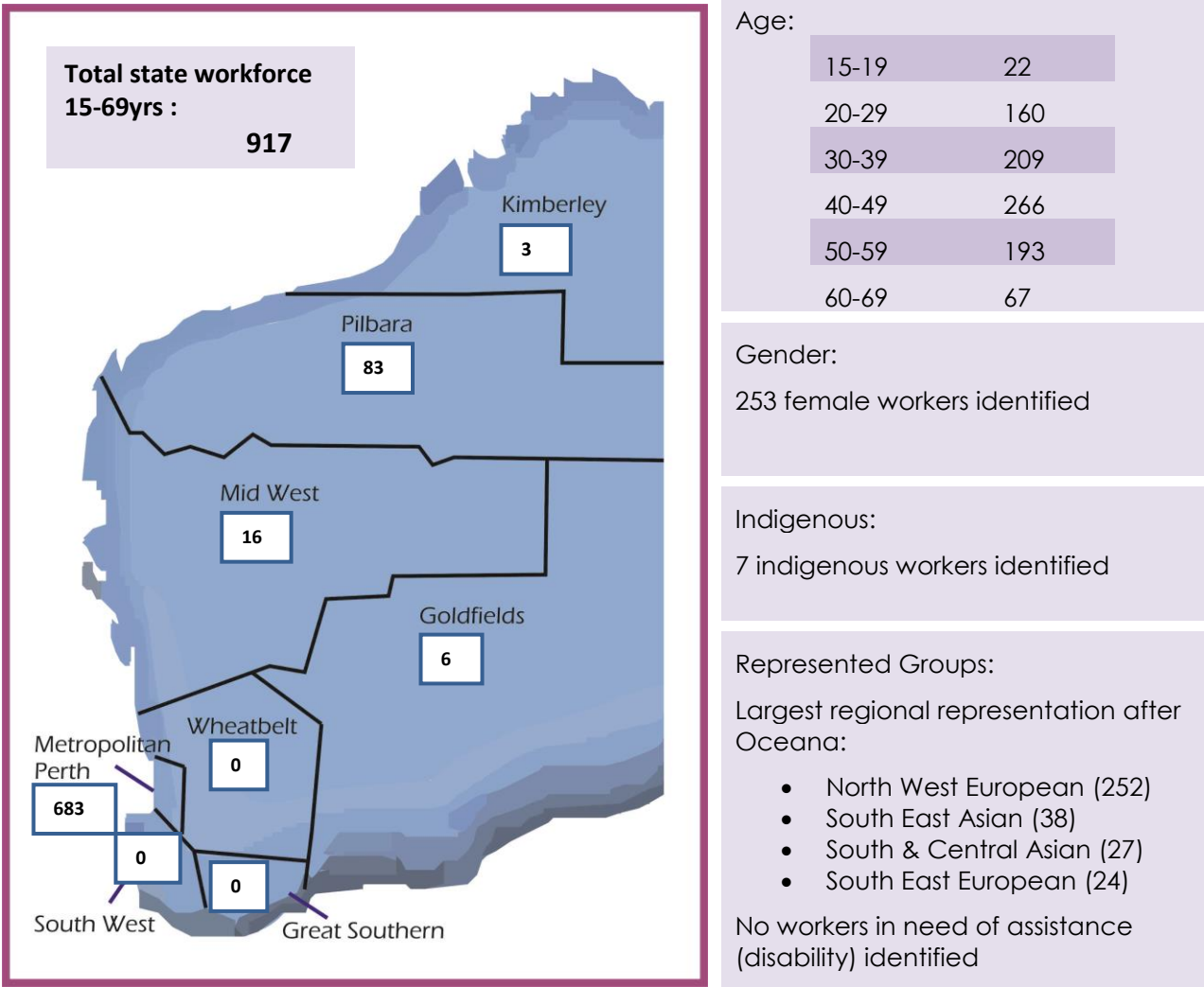
Western Australia is the most energy and gas-dependent economy in Australia and natural gas supplies more than half of WA's primary energy requirements as it fuels at least 60 percent of the State's electricity generation. Access to secure and affordable natural gas is critical for the State's manufacturing, processing and mining industries and the thousands of jobs they represent.

The State's two largest individual users of gas are Alcoa which operates three alumina refineries in the south-west) and Burrup Fertilisers (which operates the world's largest ammonia plant on the Burrup Peninsula, near Dampier). Together they account for more than half of the natural gas consumed in WA.

Liquefied Petroleum Gas (LPG)

Western Australia currently has two major domestic market production points for LPG. They are the BP Refinery located at Kwinana and Wesfarmers LPG also located at Kwinana. Western Australia also has the infrastructure and/or ability to import LPG domestic supplies via ship and road tanker from other locations.

Figure 5 - Statistical Data for the Gas Supply Industry



Australian Bureau of Statistics 2011, ;Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

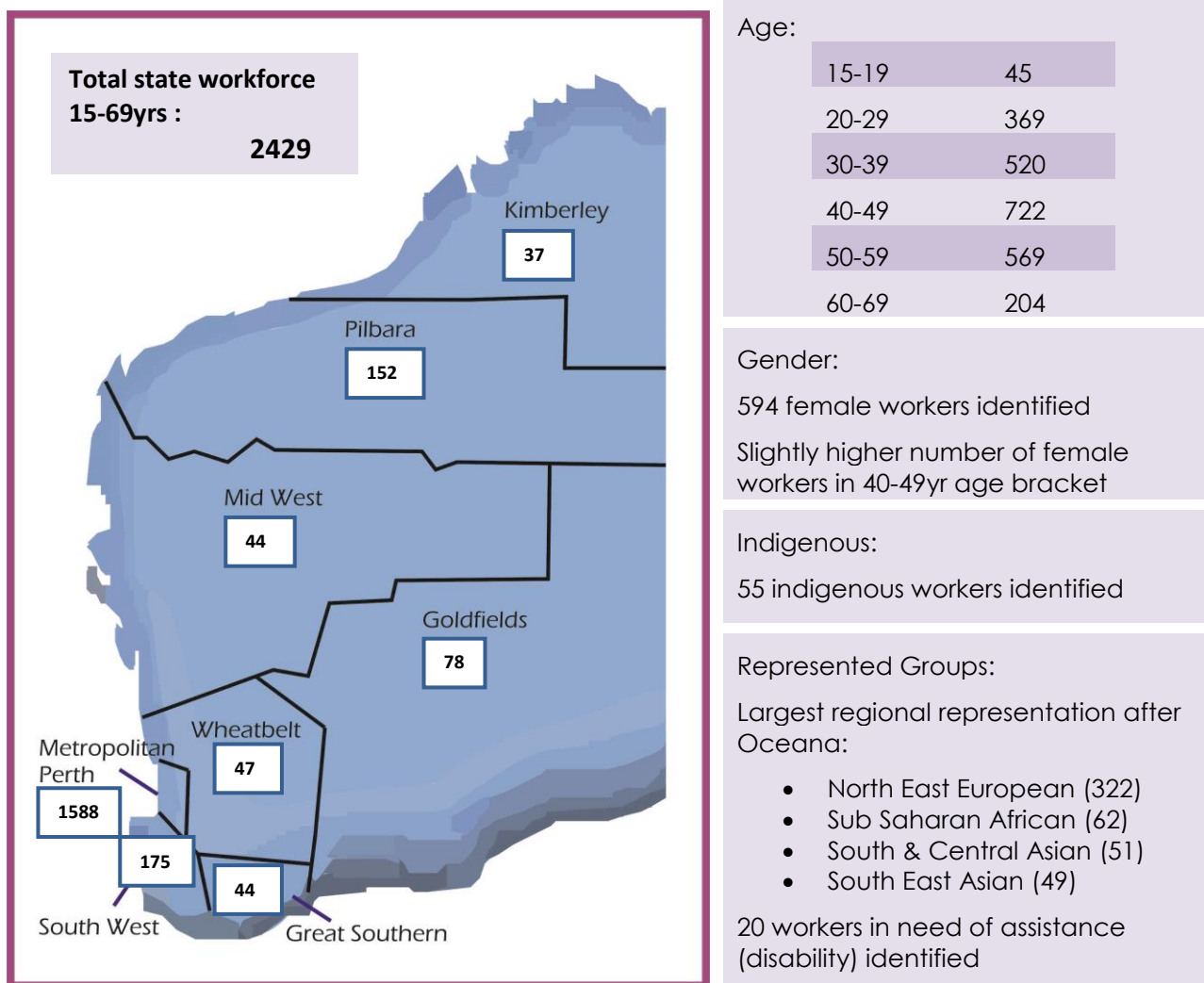
Waste

The waste industry is divided into three major sectors, being the municipal solid waste (MSW) sector, commercial and industrial (C&I) waste sector and the construction and demolition (C&D) waste sector. Each sector is supported by ancillary services.

Within each of the waste sectors, there are activities undertaken that involve waste collection - essentially transport logistics, processing and treatment of waste normally undertaken within a facility (enclosed factory or yard) and the disposal of waste at landfills.

There is also a range of support and ancillary activities associated with the waste management industry, including approvals and regulatory activities, as well as the planning, procurement, construction and implementation of waste management initiatives.

Figure 6 - Statistical Data for the 'Waste' Industry



Australian Bureau of Statistics 2011, ;Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

Water

Organisations in the water industry design, construct, operate and manage complex water and wastewater networks, from water catchment management, water collection, treatment and distribution systems, and wastewater treatment plants and outfalls.

The water sector is complex and evolving, particularly in relation to its stakeholders, supply chain and overlap with other allied industries. The central functions of the water industry are retained in the public sector including all three levels of government, however the boundary between the public and private sectors are now less distinct.

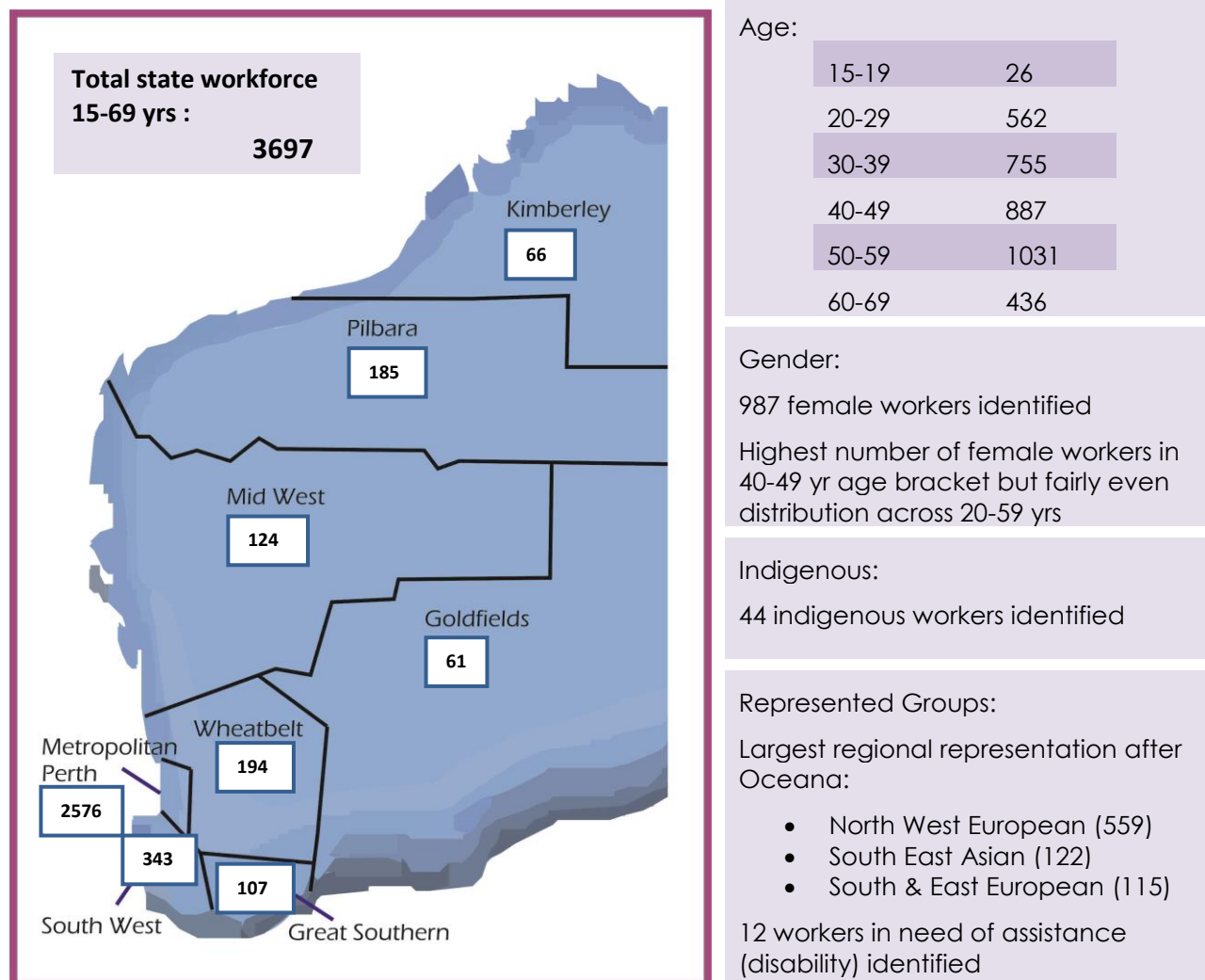
The water sector services growing and expanding populations in a climate that is dryer and more variable in relation to weather patterns. Capture and storage is becoming less of a focus with developments in desalination and advances in technologies related waste water reuse.

The major stakeholders in this sector report the following:

Aqwest (Bunbury)	37 headcount against 35 FTE
Busselton Water	30 headcount against 29 FTE
Water Corporation	3104 headcount against 2952 FTE

The sector also incorporates many private sector organisations and alliances.

Figure 7 - Statistical Data for the 'Water' industry



Australian Bureau of Statistics 2011, ;Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

Utility Sector Occupations

The following is an overview of the occupations utilized with the Utilities Sectors for which EUPA has primary reporting responsibility:

Electricity Supply					
Generation	Transmission & Distribution	Rail	Gas	Waste	Water
Plant Operators	Lineworkers (Distribution and Transmission)	Cantenary Lineworkers (an ESI lineworker specialisation)	Distribution Technicians	Truck driver	Water Treatment Operators
Electricians	Cable Jointers	Signalling Technicians (an electrician specialisation)	Transmission Technicians	Mobile plant operators	Waste Water Treatment Operators
Electrical Fitters	Electricians	Rail Communications telecommunication s	Electricians with instrumentation	Environmental scientists	
Electrical Technicians				Process Plant operators	

Table 3- Utilities Occupations

Utility sector major stakeholders:

Electricity Supply					
Generation	Transmission & Distribution	Rail	Gas	Waste	Water
Energy Supply Association of Australia	Energy Networks Association	Public Transport Authority	Australian Gas Association	The Waste Authority	National Water Commission
Sustainable Energy Association	Public Utilities Office	West Rail	ATCO Gas Australia	Department of Environment and Conservation	SEWPaC
Alinta	Western Power	BHP	Kleenheat Gas	WALGA	The Economic Regulation Authority
Horizon Power	Horizon Power	Rio Tinto	AGL Pipelines		Department of Water
Synergy			APA Group	WA Waste Association	Department of Health (Public Health)
Verve Energy			Australian Pipeline Industry Association		Department of Environment and Conservation
Western Power			DBP		The Water Corporation
Perth Energy			BHP Billiton		Aqwest –Bunbury
ERM Power			Chevron Texaco		Busselton Water
Griffin Energy			Wesfarmers (LPG)		Master Plumbers
			BP (LPG)		Water Services Association Australia (WSAA) Association
			Alcoa (Natural Gas)		Australian Water Association (AWA)

Table 4 - Major stakeholders in Utilities

Further, the following organisations are applicable to all sectors:

- Australian Institute of Energy
- Chamber of Commerce and Industry
- Clean Energy Council
- Energy Retailers Association of Australia
- Public Utilities Office (not water)
- CEPU

Industry Trends

Changing Market Conditions

In recent years, the sector has been significantly affected by:

- Changes in organisational structures (including corporatisation, contracting and internal reviews/re-structures)
- Changes in work methods, staffing levels and management approaches
- Restructuring of the energy market
- Consumer competition policy
- Increasing government and consumer demand for a response to global warming

The Strategic Energy Initiative

The Office of Energy launched the States' Strategic Energy Initiative (SEI) in August of 2012. The SEI suggested a framework to deliver secure, reliable, competitive and cleaner energy to ensure a high standard of living for all Western Australians and to support continued economic growth in the state. The SEI proposes an energy vision for 2030 to deliver certainty to investors, and to enhance future competitiveness and productivity.

The SEI has four strategic goals:

- Secure energy
- Reliable energy
- Competitive energy; and
- Cleaner energy

The SEI also aims to develop future energy demand and supply scenarios for Western Australia so that the nature and scale of the challenge in meeting or future energy needs can be understood.

The SEI predicts demand for energy is to grow significantly impacting upon electricity generation, gas transmission/distribution and electricity transmission/distribution networks.

The Government is implementing an integrated strategy to improve the safety, reliability and quality of power supply to Western Australian electricity customers who depend on transmission and distribution networks.

The State Waste Strategy - Waste Industry

The stated aim of the State Waste Strategy is to "move Western Australia to best practice in Waste Management by 2020 and to drive a decade of significant improvement in the management of waste." (*Waste Authority, 2010*).

The Waste Strategy has specific strategies in the areas of Waste Avoidance, Resource Recovery, Waste Disposal and Data, Monitoring, Reporting and Review.

The Waste Strategy has the potential to significantly impact on the waste management industry, primarily by promoting the recycling and processing of an increasing amount of waste from the three waste streams.

The major drivers for change in the industry relate to the growth in quantities of waste generated and the methods used for collection, treatment and disposal.

In recent decades, local governments have introduced recycling collection service or drop off facilities to recycle paper products and packaging materials. They have also separated out green waste and some white goods from their bulk verge collection services. This has caused an increase in the amount of waste that is diverted from going to landfill.

More recently, significant progress has also been made, and more is planned, for the diversion of MSW from landfill through the processing of this waste in resource recovery facilities. These are large facilities that process the waste into usable products such as compost, energy and recycled packaging material. All of the five metropolitan regional councils in the Perth region either have or are planning to establish a resource recovery facility to process at least part of their MSW.

National Water Initiative and the National Water Industry Skills Strategy

The National Water Initiative was agreed to by Western Australia in 2006 and has shaped the sector in a number of ways.

Developed under the National Water Initiative, the National Water Skills Strategy identified strategies to ensure the water industry workforce takes full advantage of state and commonwealth government opportunities.

EUPA managed and developed a national Certification Framework for operators of potable water treatment facilities in 2011/12 as a component of this strategy. The proposed framework involved considerable national consultation and is currently with the National Water Commission for consideration.

The NWC has been supportive of the framework and it is expected that the certification program would be extended to other disciplines within the water sector if successful. This would include waste water operators and reticulation (distribution) network operators.

Labour and Skill Demand

Attraction and Entry to the sector

Attraction to the utilities sector is a difficult process for most stakeholders in the utilities industry. Many occupations are shared with other industry sectors including the resources sector. Generally speaking, the industries suffer with a low public profile.

Crowding of Labour Market Place

Demand for workers with skills prized by the utilities sector is predicted to be significant for the foreseeable future as skills and labour shortages will be experienced due to technology developments and by many industry sectors competing for tradespersons with the same skill sets, that is:

- Resources, mining and mineral processing
- Gas and Petroleum extraction and processing
- Energy production (electricity supply)
- Telecommunications - National Broadband Network Project
- Construction both Domestic and Commercial

Population Growth

Population growth throughout Western Australia is predicted to be sustained over the long term and be significant over the shorter term in response to the demand for labour generated through the resources sector. Whilst the domestic construction sector has been described as 'flat' currently the States' population is predicted to more than double to some 4.5 million people by 2050.

Predictions for growth vary, however it is accepted that the State will experience a level of sustained population expansion and this growth will in itself be a driver for additional skilled

labour to provide the necessary utilities for energy, water and waste. This scenario equates to a high demand for the construction, maintenance and operation of public utilities.

The growth of existing cities and towns and the establishment of new communities will continue to have a direct effect on the expansion of the States' electricity generation capacity and its transmission and distribution networks

Further, the States' Electricity Generation capability is continuing to expand through the utilisation of various technologies that now see localised, small scale generation capabilities improving.

Regional Impact

- Increasing population growth in regional Western Australia requires an enormous investment in public utilities infrastructure. This involves the construction, maintenance and operations of electricity, gas, water and waste infrastructure.
- The existing utilities infrastructure spans the entire state requiring workers to live or travel to remote places.
- Large scale renewable projects are planned/constructed in regional Western Australia.
- The current construction of large scale resources projects has created an increasing demand for workers with skills in power generation, transmission and distribution. Competition for this sector of the labour market is tight.
- Variability in weather patterns is requiring the utilities industry to shift its focus from traditional sources and methods to alternatives. This involves more construction and new skill requirements of its workers.

Refer to the Public Utilities Office for greater detail

Regulatory Requirements (if applicable)

Please refer to Appendix 7 for a detailed summary of licensing as it applies to Electrotechnology and Utilities occupations.

In addition, many entities exist in this sector through an establishment process underpinned by state legislation. These organisations have a further commitment to supply services in accordance with additional legislative requirements. This is summarized below.

Regulatory Bodies

The Economic Regulation Authority (ERA), is responsible for issuing the following licenses in Western Australia: electricity generation, transmission, distribution, retail and integrated regional licenses gas trading and distribution licenses. Full details of electricity and gas industry licensing requirements are available from the ERA. It also oversees the water industry. *(From the Public Utilities Office website).*

Relevant Legislation

The Minister for Energy is responsible for administering the following legislation in Western Australia. The Coordinator of Energy supports the Minister in this role.

- Dampier to Bunbury Pipeline Act 1997
- Electricity Corporations Act 2005
- Electricity Industry Act 2004 (all parts other than Part 9A)
- Energy Arbitration and Review Act 1998
- Energy Coordination Act 1994 (all parts other than Parts 2 & 3)
- Energy Corporations (Transitional and Consequential Provisions) Act 1994
- Energy Operators (Powers) Act 1979
- Electricity Transmission & Distribution Systems (Access) Act 1994\
- Fuel, Energy and Power Resources Act 1972
- Gas Corporation (Business Disposal) Act 1999

- Gas Supply (Gas Quality Specifications) Act 2009 (Act other than Part 5, Division 2)
- National Gas Access (WA) Act 2009
- State Energy Commission (Validation) Act 1978

The following Codes were established under the *Electricity Industry Act 2004*:

- Code of Conduct for the Supply of Electricity to Small Use Customers
- Electricity Industry Customer Transfer Code
- Electricity Industry Metering Code
- Electricity Industry (Network Reliability and Quality of Supply) Code
- Electricity Networks Access Code

WA's independent economic regulator, the Economic Regulation Authority, has established the following gas industry-related Codes under the *Energy Coordination Act 2004*:

- Compendium of Gas Customer License Obligations (also known as the Gas Customer Code)
- Gas Marketing Code of Conduct

The Coordinator of Energy provides policy advice to the Minister for Energy in relation to the operation and amendment of electricity and gas codes in WA.

Source Public Utilities Office Website

Water

- Country Areas Water Supply Act 1947
- Country Towns Sewerage Act 1948
- Environmental Protection Act 1986
- Health Act 1911
- Land Drainage Act 1925
- Land Drainage (Validation) Act 1996
- Metropolitan Water Supply, Sewerage, and Drainage Act 1909
- Metropolitan Water Authority Act 1982
- Rights in Water and Irrigation Act 1914
- Water Agencies (Powers) Act 1984
- Water Boards Act 1904
- Water Corporation Act 1995
- Water Efficiency Labelling and Standards Act 2006
- Water Services Act 2012
- Water Services Licensing Act 1995
- Waterways Conservation Act 1976

The National Water Initiative and the National Water Industry Skills Strategy have also shaped the industry over recent years. EUPA has been pleased to play an important role in the skills strategy, managing the development of a certification scheme for operators of potable water facilities on behalf of Government Skills Australia during 2011/12.

Major Challenges and Barriers

ANZSCO Shortcomings:

The industry is comprised of a broad spectrum of occupations spanning administrative roles, labourers, tradespeople, technicians and professionals. Many of the occupations within the utility industry sectors do not specifically appear in the current ANZSCO. For example, some occupations across waste, gas and water sectors fall generically under 'stationary plant operator' which does not either reflect the nature of the work or the specific difficulties experienced by some industries to attract workers (e.g. the waste industry). As such occupations in these industries are lost in the wider application of the ANZSCO and are not specified in the State Priority Occupations List, affecting their consideration for skilled migration.

Population Growth:

Predictions for population growth vary, however it is accepted that the State will experience a level of sustained population expansion and this growth will in itself be a driver for additional skilled labour to provide the necessary utilities for energy, water and waste.

The growth of existing cities and towns and the establishment of new communities will continue to have a direct effect on the expansion of the States' electricity generation capacity and its transmission and distribution networks as will the use of gas as an alternate energy source. Demand for water will increase as will the amount of waste product generated.

Climate Change and Environment:

Government climate and carbon reduction policy is expected to drive demand for additional workforce capabilities in environmental and sustainability technology applications in all Utility occupations.

The challenges here are twofold – ensuring new entrants to the industry are suitably qualified for the new occupations and secondly ensuring the current workforce is able to adapt to the new technologies and systems of work.

Competition for Labour:

Rapidly emerging skills gaps are occurring, notably in technical, professional and managerial categories. Demand for skilled labour from the Utilities sector is significant for occupations such as engineers, technicians, tradespeople and operators to apply those skills in other sectors such as:

- Resources, mining and mineral processing
- Gas and Petroleum extraction and processing
- National Broadband Network Project

Employment growth:

Growth in the Utilities sector is predicted to be better than the national average in the coming years to 2013-14. (DEEWR) This due to demand for services as a result of:

- Population growth
- Technology development
- Maintenance and replacement of aging infrastructure

Industry Leadership:

The major State Government utilities are well served through their respective Human Resource agencies to address their specific workforce development needs however at a whole of industry level awareness of the imperative and commitment to adopt a coordinated approach (that is across all the utilities sectors) to workforce planning is low.

It has been found that there are very few peak organisations able to work with industry at the enterprise or agency levels to assist in the development of attraction and retention strategies. Significant opportunities exist for EUPA to collaborate with peak bodies, central agencies and employer associations to assist planning and coordination.

Raising Industry Profile:

The Utilities sector seeks to improve the means by which industry occupations are promoted to the community in an effort to align occupations to individual and community values.

School leaver awareness of career opportunities in the utilities industry sectors is considered to be limited and sectors of the industry are not seen as appealing as an employment option. In fact the utility industry sectors are somewhat invisible to would be school leavers and those that provide career advice.

New and Emerging Skills

Job roles are changing due to environmental pressures and government policy, with the likelihood that demands for new qualifications and skills sets will evolve for employees in areas not yet envisaged.

Skills gaps emerging in technical, professional and managerial occupations are numerous and examples include:

- Renewable energy planning and design
- Lineworker with telecommunications competencies
- Vegetation Control worker
- Waste Trackers and Auditor
- Environmental Scientists and Engineer specializing in Waste Treatment processes
- Energy Markets
- 'Live Line Glove and Barrier' qualified worker
- Electrician (with HV switching experience)
- Waste Education Officer

Occupations in Demand (ANZSCO Code)

Occupations in Demand		
ANZSCO6	Occupation	Summary
233111	Chemical engineer	Highly relevant to the Utilities sectors of Gas, Water and Waste.
233211	Civil engineer	Civil engineers are employed extensively throughout the water sector either through direct employment or through some form of consulting or contractual arrangement. Care is required not to over state demand as in many instances contracting organisations provide their services to all industry sectors where civil engineering expertise is required.
312211	Civil engineering draftsman	The Water sector has continuing demand for civil engineering draftspersons and technicians as it seeks to mitigate the effects of climate change and adopts alternate technologies for the sourcing and processing of water.
312212	Civil engineering technician	
311412	Earth science technician	
233311	Electrical engineer	There has been a significant increase in the number of Electrical Engineers working in WA over the past ten years. Likewise the numbers of Electrical Draftspersons and Technicians continue to grow. This continued high demand is due to major resource and energy infrastructure projects however the occupation is most relevant to the utilities industry sectors of electricity supply, gas and water.
342211	Electrical linesworker	This occupation is critical in the Utilities sector of electricity supply, it encompasses:

Occupations in Demand		
ANZSCO6	Occupation	Summary
		<ul style="list-style-type: none"> • Transmission Lineworker • Distribution Lineworker • Rail Traction lineworker
341111	Electrician (general)	<p>This occupation is critical in the electrical and utilities sectors. It is inclusive of the separate trades of "Electrician" and "Electrical Fitter"</p> <p>The number of electrical trade workers in WA has almost doubled in the ten year period - 2002 to 2012. Despite this increase the Electrical trades have been on the skills shortage list for 13 of the past 22 years and 10 of the past 12 years. This growth is also demonstrated by the significant increase in the number of Electrical Workers Licenses issued in the past year.</p>
139912	Environmental manager	<p>This is a critical occupation in the Local Government industry sector as effective environmental management is core to the accountability requirements placed upon public governance authorities/agencies.</p> <p>However the role has become increasingly important to all sectors of the economy due to national policy on environment and climate change. Many local government agencies report difficulty in filling positions due to the associated crowding out effect caused by the resources sector.</p>
233512	Mechanical engineer	<p>This is a critical occupation required in the utilities industry sectors of Electricity Supply - Generation, Gas Supply Water and Waste.</p> <p>EUPA does not have primary responsibility for Mechanical Engineers - refer EATC</p>
233513	Production or plant engineer	<p>This is a critical occupation required in the utilities industry sectors of Electricity Supply - Generation, Gas Supply, Water and Waste.</p> <p>EUPA does not have primary responsibility for Production or Plant Engineers</p>
232212	Surveyor	<p>This is a critical occupation in the Local Government industry sector related to the provision of Public Works services.</p> <p>Many local government agencies report difficulty in filling positions due to the associated crowding out effect caused by the resources sector.</p>

Table 5 - Occupations in Demand for Utilities

Workforce Development Opportunities

- Opportunity exists to achieve greater acknowledgement of the Utility sector and occupations in the ANZSIC and ANZSCO codes to give greater clarity to the sector in defining career paths.
- Job roles are changing due to environmental pressures and government policy, with the likelihood that demands for new qualifications and skills sets will evolve for employees in areas not yet envisaged. Therefore training providers will need to better engage with industry so that they are able to meet future needs.
- Employment growth in the Utilities sector is predicted to be better than the national average over the coming years to 2013-14.

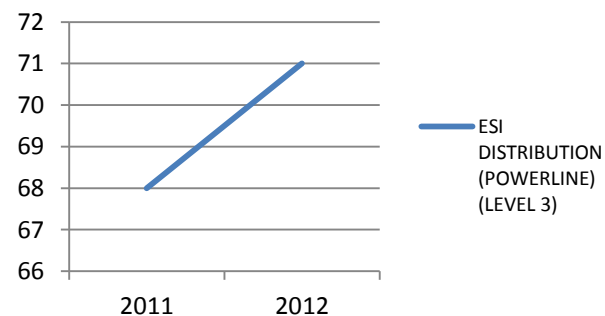
- There are too few RTOs in WA with scope to deliver Utilities sector qualifications, particularly for higher level qualifications.
- EUPA Training Council linkages to the tertiary sector is at best ad-hoc and ill defined
- A gas distribution technician apprenticeship was established in 2011 however no RTO has yet committed to delivery of the respective qualification.
- The Strategic Energy Initiative Energy 2031 seeks to enhance the skills of the State's energy industry workforce to make sure the workforce is well placed to cater to the emerging needs of the industry.
- The Waste sector in WA is not engaged in nationally recognized training arrangements

VET Training Data by Qualification – Enrolments and Completion

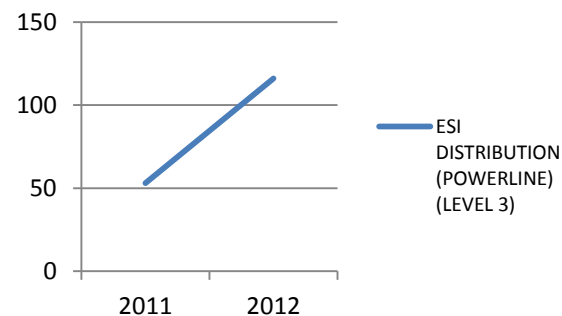
Figure 8 - VET Data for Utilities

Electricity Supply Industry – Transmission and Distribution

Commencements



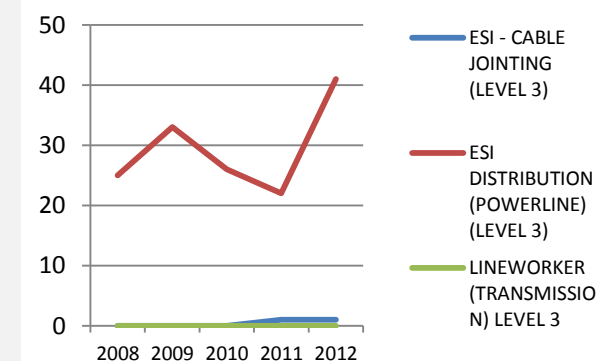
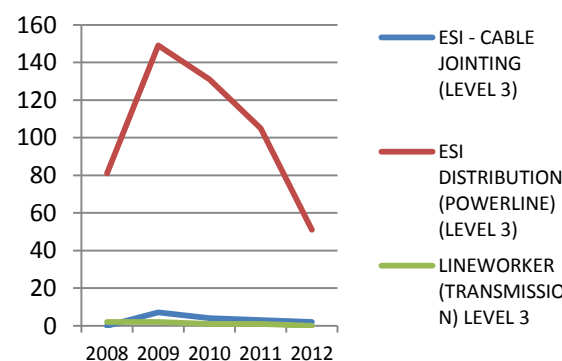
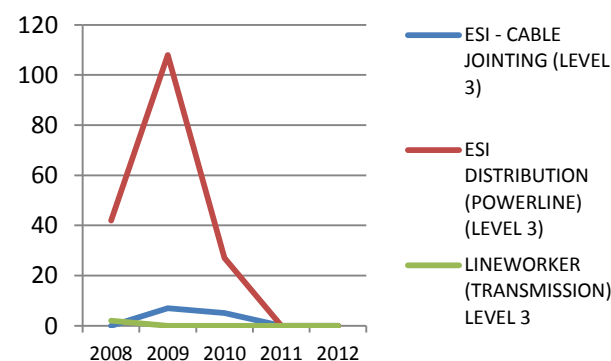
In Training



Completions

Nil

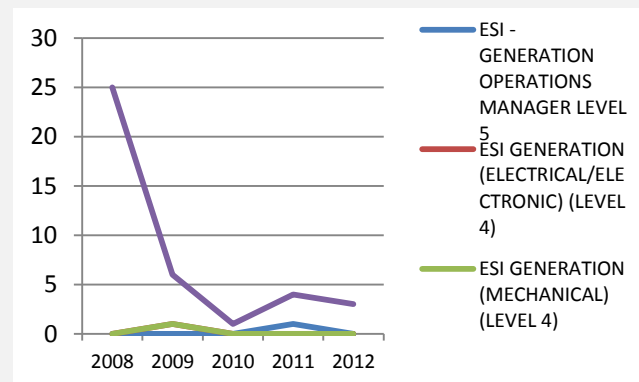
A new ESI Distribution Lineworker apprenticeship qualification was introduced in 2011 hence no completions noted.



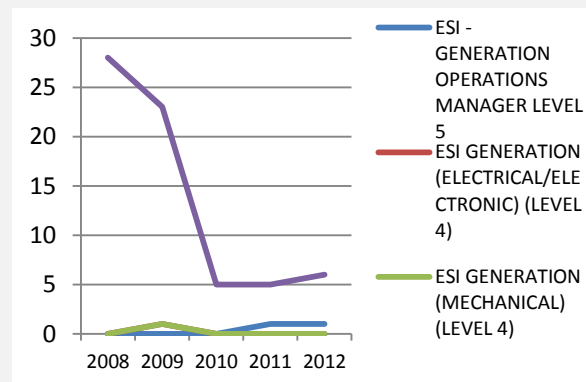
The previous ESI Distribution Lineworker qualification was subsequently taught out thus showing the decline in numbers of commencements and those in training

Electricity Supply Industry – Generation

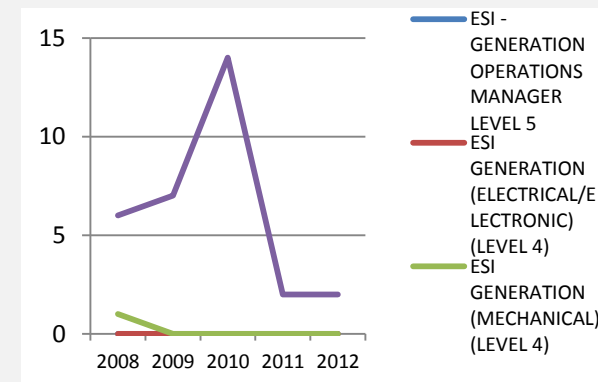
Commencements



In Training

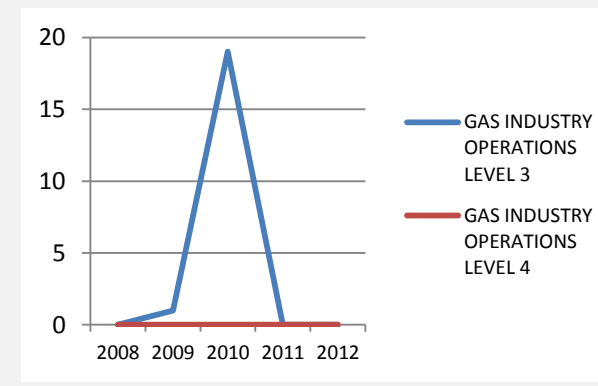
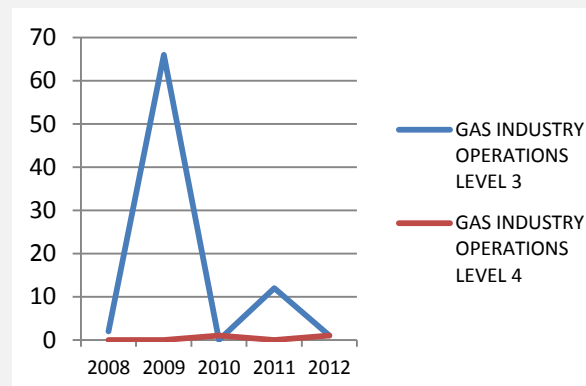
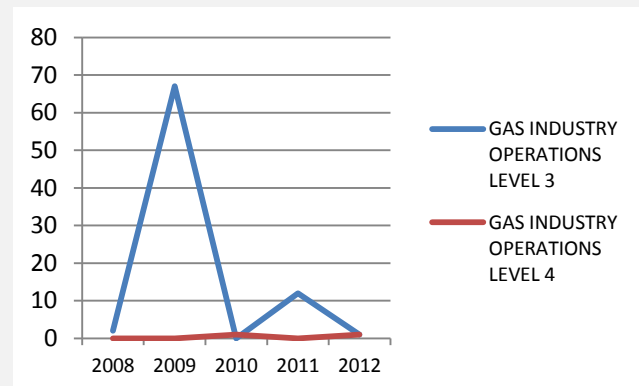


Completions



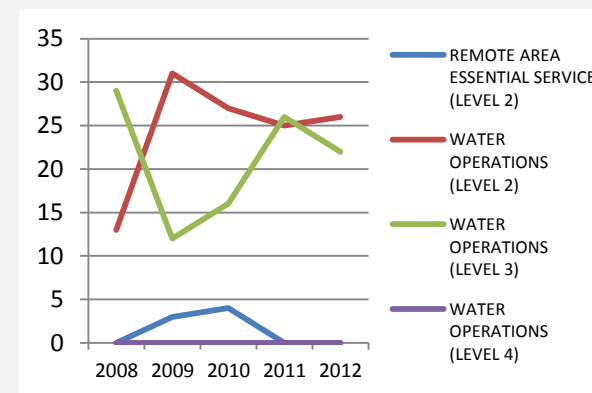
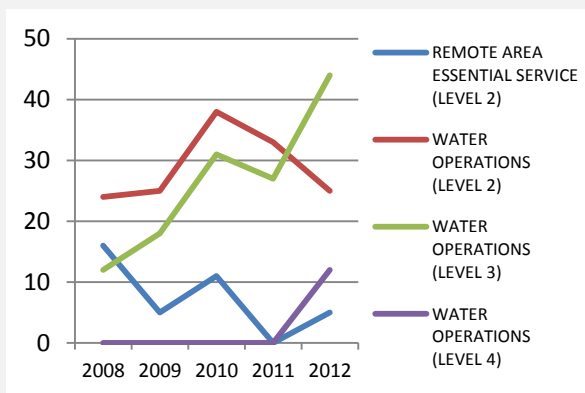
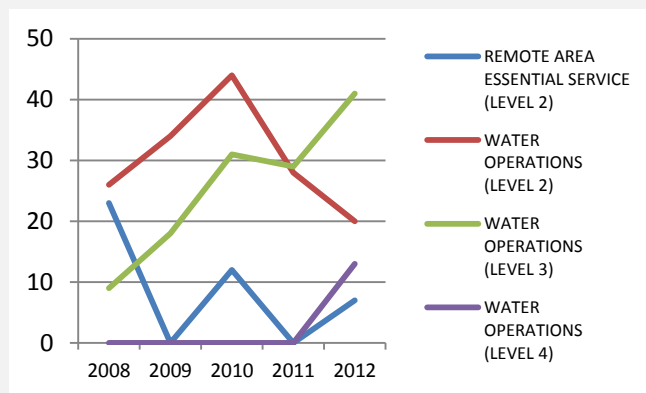
Engagement of the ESI Genration sector in nationally recognised training continues to be low. The advent of the revised training packge in 2011 impacted on what trainig was being delivered by the very few RTOs that service this sector.

Gas Supply Industry



The Gas sector has been through major restructure with changes to ownership of the distribution assets and growth in the transmission sector. This restructuring saw public RTO withdraw from delivery of the then traineeship (2010/11). An apprenticeship was established in 2011 but there have been no enrolments to date due to lack of RTO engagement

Water and Remote Area Essential Services Industry



Delivery of Water Operations Traineeships remain constant due to the support of the Water Corporation and its relationships with both Central and Challenger Institutes.

Remote area essential services programs are delivered in remote aboriginal communities as a mechanism to assure provision of safe drinking water.

Training Effort in the Utilities Sector

Pre-Employment

The Utilities sector may draw from the electrical pre-apprentice pool to recruit apprentices in the electricity supply sector however there are no utilities specific pre-employment programs.

Apprenticeships and Traineeships

Electricity Supply (Transmission and Distribution)

Western Power – Power Training Services is the enterprise main RTO with delivery of lineworker apprentice training predominately to its own staff. There are smaller private RTOs servicing this sector through delivery to Horizon Powere and contractor organisations.

There is no Public RTO delivery of these apprenticeships.

Gas

A gas distribution technician apprenticeship was established in 2011. To date there have been no enrolments despite industry willingness to provide these employment oportunities which is due to no RTO being able to provide training services. This came about due to the larger pubic providers and being unwilling to deliver this apprenticeship as they considered it to be a “thin market”.

Smaller RTOs are now considering options for servicing this training need.

VETis

The utilities sector is largely invisible to the school sector.

The major utility organizations however do provide educational support programs to the school sector – that is they aim to build awareness of their product and services. I.e. Electricity production and how it is supplied or Water Supply and Services. In the main these programs do not have a focus on employment or careers.

It is considered that despite the best efforts of the utility organizations very few career advisors and consequently their clients are aware of career and training opportunities related to the sector.

This is particularly true for sectors that would seem to be less appealing such as Waste where on the one hand Government initiatives and environmental policy are creating significant new and varied employment opportunities while and on the other hand there are huge challenges to overcome in convincing school leavers and others to consider the Waste industry as an employment option.

Other VET related issues:

Apart from the water sector there is very little public provision of nationally recognised training services related to the other utilities sectors. Much of the training that is provided is either through fee-for-service arrangements or by the utility organisation being an enterprise RTO. There is however significant amounts of non recognised training being delivered that is based on organisational needs or by suppliers of product and services.

It is considered that effort is required to grow RTO capacity to service this industry sector and to investigate alternate delivery strategies which are more aligned to industry needs than is currently the case.

Overview of the Public Administration Industry Sector

Industry Analysis

Government

Governments significantly contribute to the economic development of Western Australia through direct employment of local people and through the provision of necessary support services that enable communities and the economy to function and grow. They do this by providing largely intangible outcomes known as 'public goods' (RoGS 2013) and exist at three levels. In accordance with our obligations, EUPA engages with and reports on the following:

State Government – also known as the State Public Sector. This sector supports the elected government of the day in formulating and implementing policy; delivering services to the state; and regulating private sector activity where there are economic, social and environmental outcomes.

Local Government – This sector sits closest to the communities that they serve. It delivers an enormous breadth of services including:

- The planning, construction and management of infrastructure, waste services, recreation and social infrastructure; and
- Planning, monitoring and enforcement of environmental, health, animal, building and land use/development.

The State Public Sector is the States' largest employer. Official figures range from over 170,000 employees as at the end of June 2012 (DEOPE 2012), to over 154,000 employees (headcount), measured against a 'full time equivalent' (FTE) count of over 124,700 positions. (HRMOIR data current as at 30 September 2012). Note that HRMOIR collects data from 125 agencies and entities.

Local Government is reported to have a total of 22,831 employees across 140 authorities as at 30 June 2012. The number of local governments has reduced to 138 during 2012.

Government agencies and authorities vary widely in relation to the size of individual entities. This is particularly important in Local Government when considering the focus on maximising efficiencies through shared resourcing and the development of a consistent planning methodology (Integrated Planning).

Please note that ABS data has not been presented for government as the figures provided are clearly significantly different to those provided by government's own reports. This may suggest that many workers identify themselves at census time within the occupational role but not in the government sector.

Translators and Interpreters

The Translators and interpreters sector is included within this report as national qualifications have been housed within the PSP12 Public Sector Training Package. The sector assists to either:

- Translate written words from one language to another
- Interpret spoken or signed language from one language to another.

Workers are generally not employed directly by either level of government. Instead they are contracted as needed. Due to the public policy surrounding multi-cultural support services this industry sector has been included within state government.

The sector is dominated by workers that are called upon/contracted on an 'as-needed' basis. This provides little stability and an inability to access most sources of funding as employment is not ongoing.

Public Safety

The public safety industry works to prevent natural and man-made threats and to provide the community with protection from those threats; seeking to ensure the security and safety of the state and its communities. Public safety industry coverage includes:

- Defence*
- Australian Police Forces*
- Fire Services and Land Management Agencies
- State/Territory Emergency Services
- Emergency Management
- Aquatic Search and Rescue.

* Please note that EUPA's scope of industry coverage does not include the defence sector or the Australian Federal Police (AFP). Workforce planning and development occurs outside the state of Western Australia.

The public safety industry requires a sustainable workforce of competent and capable career and volunteer personnel. (GSA Website)

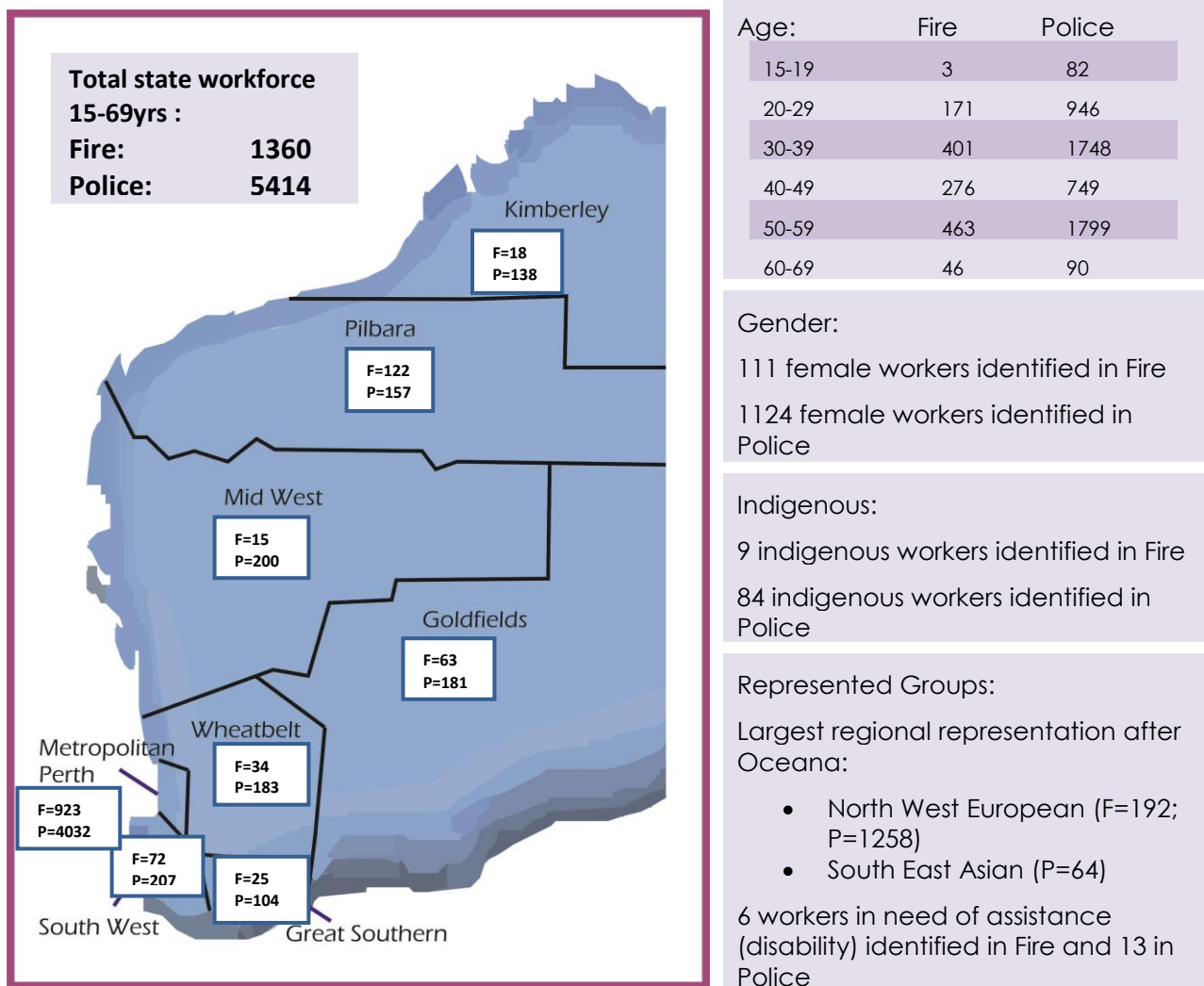
The sector is dominated by three major entities in Western Australia:

- Department of Environment and Conservation. DEC reported 1921 FTE and a headcount of 2244 employees. It should be noted that DEC performs a number of roles including science, conservation, regulation, sustainability management and strategic policy and planning.
- Department of Fire and Emergency Services. The department reported 1404 FTE and a headcount of 1494 employees. A total of 1,123 firefighters is reported. (FESA 2011/12 Annual Report)
- Western Australia Police. The agency reported 7713 FTE and a headcount of 8664 employees. It reports a total of 2445 police officers in the metropolitan area and 1337 in regional Western Australia (WAPOL Annual Report 2011/12). (FTE and Headcount figures reported through HRMOIR September 2012).

It is important to realise that other agencies also contribute to public safety outcomes. For instance, the Department of Child Protection plays a surprising role in the collaborative management of emergency incidents.

The sector also relies heavily on a volunteer workforce. The Department of Fire and Emergency Services is currently seeking to establish firm numbers of active volunteers. Current estimations place the figure in excess of 30,000 volunteers.

Figure 9 - Statistical Data for 'Fire Fighter' and 'Police Officer' Occupations



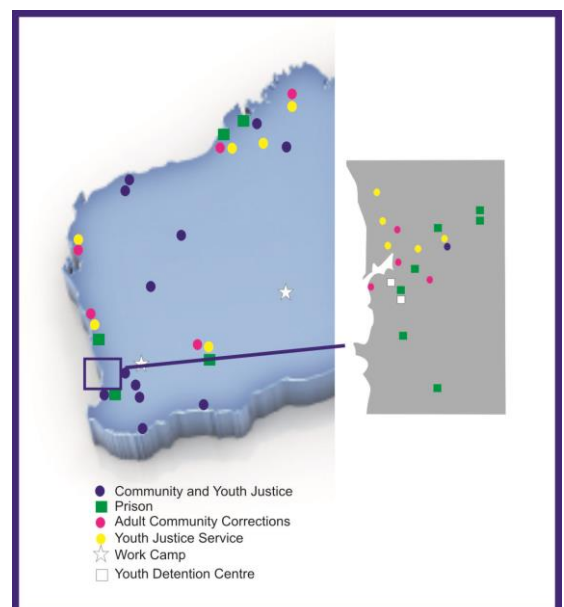
Australian Bureau of Statistics 2011, ;Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

Corrective Services

The Corrective Services Industry provides services that protect the community through offender management. It implements the correctional sanctions determined by the courts and releasing authorities such as parole boards (RoGS 2013). Job roles include direct prisoner supervision, facility management, offender rehabilitation and social services. Organisations in this sector provide critical support services to offenders – diverting them from committing further crimes and assisting them to become more responsible citizens.

This complex environment requires well trained staff to ensure successful management of offenders in accordance with the regulatory requirements placed upon them.

Figure 10 - Location of Corrective Services Facilities

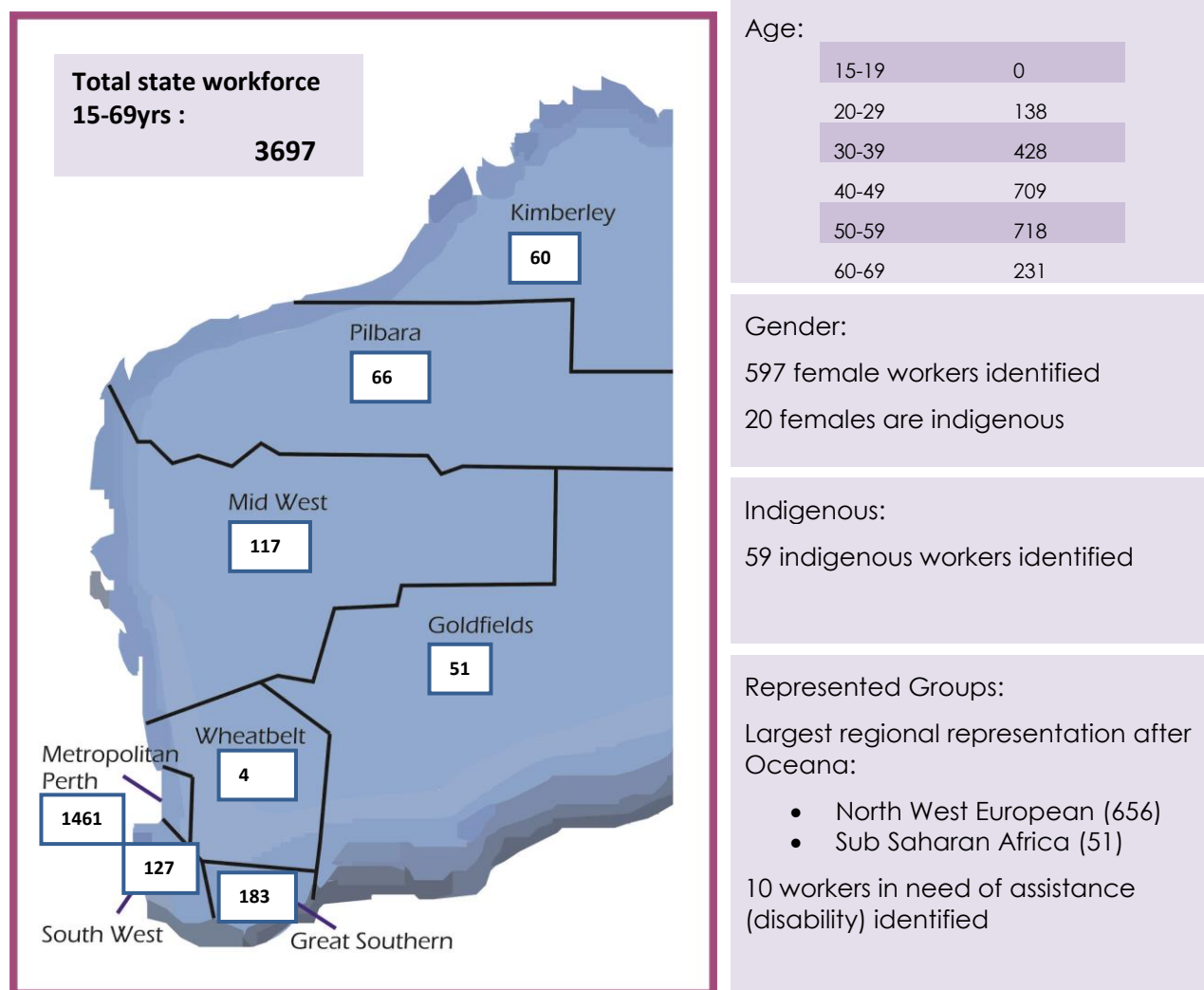


In Western Australia, the sector is comprised of the Department of Corrective Services, Serco which manages Acacia Prison and prisoner transportation.

The Department of Corrective Services report a headcount of 4535 against an FTE of 4076 (HRMOIR September 2012)

Serco employs a total of 390 personnel at Acacia Prison, 239 of which are custodial officers. (Acacia Prison Annual Report 2011/12).

Figure 11- Statistical Data for 'Prison Officer Occupation



Australian Bureau of Statistics 2011, ;Western Australia viewed 5 March 2013,
<https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml>

EUPA is largely concerned with occupations in the following areas:

- Prisoner supervision (Prison Officers and ancillary officers)
- Essential support services in areas such as medical (including psychology and psychiatric services) and vocational education and training trainers.

The Department of Corrective Services also employs staff involved in community corrections and supervision as a result of court orders and parole.

Major Stakeholders – Public Administration

Major stakeholders that influence the Public Administration portfolio include:

State Government

- Public Sector Oversight authorities
 - Public Sector Commission
 - Office of the Auditor General
 - Corruption and Crime Commission
 - Office of the Western Australian Ombudsman
 - Office of the Information Commissioner.
- Institute of Public Administration Australia (IPAA)
- Public Sector Union/Civil Service Association

Local Government

- Department of Local Government
- Local Government Managers Association (LGMA)
- Western Australia Local Government Association (WALGA)
- Institute of Public Works Engineering Australia (IPWEA)
- Australian Centre of Excellence for Local Government (ACELG)
- Australian Local Government Association (Parent of WALGA)
- Australian Local Government Women's Association (ALGWA)
- WA Rangers Association
- Local Government, Racing, Cemeteries Employees Union (LGRCEU)
- Australian Services Union (ASU)

Public Safety

- Department of Fire and Emergency Services
- Department of Environment and Conservation
- Western Australia Police
- Emergency Management Australia
- ANZPAA
- Australasian Fire and Emergency Services Authorities Council
- Surf Life Saving WA
- Association of Volunteer Bush Fire Brigades Western Australia
- United Firefighters Union Western Australia
- WA police Union

Corrective Services

- Department of Corrective Services
- Serco-Asia Pacific
- WA Prison Officers Union

Industry Trends

The following key policy and strategic documents contribute to shaping the public administration industries:

All Sectors:

All public administration industry sectors are impacted upon by Western Australia's population and climatic trends. Issues highlighted include:

- Western Australia's population is growing and urbanisation is spreading into many of the regions. This brings with it the need for increased governance and localised public services.
- Demand for services and increasing expectations placed upon each sector are driving the need to develop new and innovative workforce development strategies.

- Land, housing and cost of living issues are creating barriers for public administration stakeholders to attract and retain workers. This is noted particularly in the northern region of the state.
- Climate change is creating more frequent and more extreme events.
- The sectors continue to establish consistent and clear interoperability charters and agreements to prepare for and respond to emergency incidents.
- Economic uncertainty and tightening budgets are causing public administration organisations to operate within firm fiscal limits. Many stakeholders are affected by current 'efficiency dividends' and the 'FTE Cap'.

State Government

The state government workforce is influenced by:

- Strategic Directions for the Public Sector Workforce 2009-2015. The document contains 38 initiatives that will be implemented over 5 years to ensure the ongoing viability of the Western Australian public sector workforce. It identifies the responsibilities of central and line agencies.
- The Aboriginal Employment Strategy 2011-2015. This strategy seeks to assist the public sector to attain indigenous workforce participation rates that reflect the population of Western Australia.
- Employment Based Training Strategy 2013-2015. This strategy seeks to encourage the use of formal employment based training (including apprenticeships and traineeships) as a critical workforce development strategy.

The Director of Equal Opportunity in Public Employment also notes an intention to establish a 'Disability Employment in the WA Public Sector Reference Group' to develop a strategy in 2012/13. (DEOPE 2011/12)

Local Government

'Local Government Reform' including:

- Metropolitan Local Government Review
- Structural Reform (Regional Local Governments)

LG Reform aims to:

- the State Government's Local
- create fewer but stronger more regionally focused local governments
- build a local government sector with the capacity to plan strategically
- deliver optimal services to meet community needs throughout Perth and regional Western Australia.
(dlg.wa.gov.au)

At a national level, constitutional reform is also on the political agenda. This action seeks to clarify the position of local government within the tiers of government sectors. The reform is considered necessary to formalise direct commonwealth funding of the sector.

Public Safety

Frontline First

The Frontline First philosophy continues to focus on:

- Continuing to transition the culture of the WA Police into one that is performance-based, as opposed to the old 'rank and file' hierarchy of the past.
- Developing new policing standards, which determine optimum tasking levels for a district; having contingency plans to enable optimum tasking levels at any given time and setting frontline service delivery standards – a first for the WA Police.
- Improving the deployment of policing human resources, by implementing a new human resource allocation model.
- Improving road safety, particularly in regional Western Australia.

- Cultural change, through improved leadership, accountability, performance management and adhering to corruption-resistance principles. Crime detection and clearance rates will also be enhanced at the frontline, as we implement the recommendations of a number of reviews relating to intelligence, property management and forensic analysis
(police.wa.gov.au)

The WA Police also operate under the guidance of three plans and a number of 'informing strategies' that are available at police.wa.gov.au

Department of Fire and Emergency Services – New beginnings 2024

The establishment of the new department brings critical priorities for the executive to establish. In its New Beginnings 2024 publication, DFES notes:

In Western Australia response demands are predicted to increase. Changing weather patterns are likely to elevate the frequency and severity of natural hazard emergencies including bushfire, cyclones, floods and storms. Coupled with population growth and greater urbanisation this means there is increasing potential for threat to life and property in affected communities.

Interoperability has been identified as a foundation for achieving enhanced operational effectiveness across the emergency services sector to improve community outcomes.

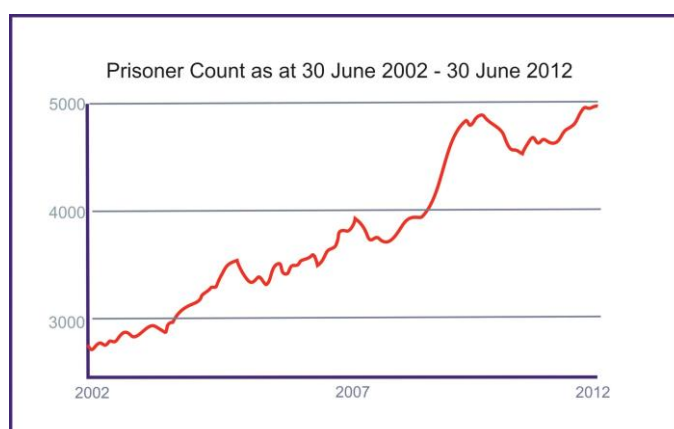
Corrective Services

The corrective services industry continues to expand to cope with rising prison populations and increasing diversity of the prisoners. This includes major works to expand existing prison infrastructure as well as construction of new/replacement facilities and work camps. Further, legislative reform continues and is often accompanied by high public and political opinion.

The department notes a focus on the attraction and retention of indigenous staff members in the regions as a priority.

(2011/12 Department of Corrective Services Annual Report)

Figure 12 - Prisoner Count 2002-2012



Labour and Skill Demand

The State Government continues to work hard to increase its profile to youth. This cohort of the community is still represented at fairly low levels, which when combined with the ageing of the existing workforce provides impetus for change.

Retention is affected by the wider need for skilled labour in Western Australia. The state government workforce is a ready source for keen employers. The government sector has a strong training and professional development culture that ensures workers maintain contemporary skills in a wide range of occupations which further adds to the attraction for the private sector.

The state government continues focus on the need for policy development and human resource management skills as a priority.

Local Government suffers a similar issue in relation to attraction and retention. The sector is rarely the choice of a school leaver who tend to focus on their desired occupation without recognizing the occupation exists within a government setting.

In addition to the skill requirements of state government, local government have a focused need for workers with skills including building inspection, environmental health, planning, civil engineering and outdoor work including heavy machinery operators and civil works.

Regional state and local government organisations are particularly at the mercy of private sector industry. Attraction and retention is difficult due to the confines that public policy place around employment conditions and remuneration. EUPA has seen evidence of the increased use of flexibility and employment of special conditions (such as Attraction and Retention Incentives in the State Government).

Finally, it is worth noting the perceived rivalry for staff between the two levels of government. (Local Govt. Review Panel)

The public safety industry largely enjoys a positive profile in the community. Sector stakeholders have managed labour needs by implementing overseas recruitment through employer sponsored visas and the training of their core operational staff without intervention from the Department of Training and Workforce Development.

A great amount of effort is currently being expended to better understand and provide for the volunteer workforce. EUPA has been heavily involved in the early stages of preliminary research to establish training processes to encourage volunteer participation – particularly in the regions.

The demand for prison officers and health professionals who support the operations of prisons and rehabilitation of offenders remains high.

The Translators and Interpreters sector also has specific skilling demands which are regularly a requirement when entering into contractual arrangements with government agencies. Given the nature of this type of work it is clear that skills must be verified in an accountable process. This is best achieved through the vocational education and training framework by issuing a qualification. Membership to professional organisations further assists to demonstrate high levels of professionalism and ethics.

Regional Impact

- Population expansion in regional areas is creating demand for higher levels of governance, public safety and correctional services and facilities.
- Governance in some regions of Western Australia is still maturing. Local Governments are only now being asked to develop integrated strategic plans that integrate community governance with financial and workforce planning.
- Due to the nature of employment, governments are unable to compete with some private sector employers to secure the most appropriate/qualified workers.
- Larger populations and urbanisation in the regions is causing public safety stakeholders to put in place strategies and plans to manage natural disasters and extreme events.

- The public safety industry relies heavily on volunteers for operational responses to emergency events. Whilst populations are expanding in regional communities, early evidence suggests volunteering is suffering. This is thought to be particularly true in Fly-in-Fly-Out (FIFO) communities.

Regulatory Requirements (if applicable)

State Government

The following acts impact upon the public sector:

- | | |
|---|---|
| • Auditor General Act 2006 | • Occupational Health and Safety Act 1984 |
| • Corruption and Crime Commission Act 2003 | • Public Sector Management Act 1994 |
| • Criminal Code Compilation Act 1913 | • Public Sector Management (General) Regulations 1994 |
| • Disability Services Act 1993 | • Public Sector Management (Redeployment and Redundancy) Regulations 1994 |
| • Equal Opportunity Act 1984 | • Public Service Regulations 1988 |
| • Financial Management Act 2006 | • Public Interest Disclosure Act 2003 |
| • Freedom of Information Act 2006 | • Salaries and Allowances Act 1975 |
| • Industrial Relations Act 1979 | • State Records Act 2000 |
| • Minimum Conditions of Employment Act 1993 | • Electoral Act 1907 |
| | • State Supply Commission Act 1991 |

In addition to the above legislation, the public sector is also required to act within the following regulatory framework:

- Premier's Circulars
- Commissioner's Circulars
- Labour Relations Circulars
- Treasurer's Instructions
- Approved Procedures and Administrative Instructions
- Public Sector Standards in HR Management
- Public Sector Code of Ethics

The WA Government is not only bound by legislation, but is often required to regulate other industries and activities on behalf of the State.

Local Government

Local Governments operate under a statutory framework and are also responsible for administering various legislation, policies and by-laws (totalling over 470 individual pieces of legislation).

As a government agency, the Department of Local Government is established under the Public Sector Management Act 1994.

Local Governments are enabled through the provisions of the Local Government Act 1995.

WA Police

Enabling Legislation:

- Public Service Act 1904
- Police Act 1892

Police Officers are sworn into service using powers provided in the Police Act 1892.

The WA Police administers 22 acts and their associated regulations.

Department of Fire and Emergency Services

The new department is now established through the provisions of the Public Service Act 1904. It administers five acts of parliament and is impacted by a further sixteen Acts.

Corrective Services:

The following acts are administered by the Department of Corrective Services:

- Court Security and Custodial Services Act 1999
- Dangerous Sexual Offenders Act 2006 (s 18, 21 and 32 and Pt 2 Div 3 and 5 and Pt 5)
- Prisoners (International Transfer) Act 2000
- Prisoners (Interstate Transfer) Act 1983
- Prisons Act 1981
- Sentence Administration Act 2003 (Pt 1, Pt 2 Div 2, Pt 5 Div 1-3, Pt 6, 7 and 8 and Pt 10 [other than section 114 and 115 A])
- Sentence Administration (Interstate Transfer of Community Based Sentences) Act 2009
- Young Offenders Act 1994

Gender/ Age Participation

Gender

The following information is sourced from the Director of Equal Opportunity in Public Employment 2011/12 Report. The report uses a measure known as the 'equity index' to measure the appropriateness of workforce participation. A value of 100 is considered to be ideal. Figures below 100 indicate a concentration at lower salary levels.

As at 30 June 2012, women represented 68.3 per cent of employees in public sector agencies and authorities, remaining relatively unchanged from 2011, when women represented 67.9 per cent of the workforce.

The representation of women in local government authorities (indoor and outdoor workers combined) declined from 52.6 per cent in 2010 to 51.8 per cent in 2012.

The equity index for women in public sector agencies and authorities has increased marginally each year for the past five years, up from 61 in 2008, to 64 in 2012.

The equity index for female local government indoor workers decreased from 83 in 2010, to 79 in 2012. The equity index for female local government outdoor workers staff decreased from 92 in 2010, to 86 in 2012.

Employment statistics also show that women are less likely to be in permanent compared with men in both state and local governments. Women are also more likely to work part-time compared to men. For local governments, these statements are true regardless of the whether the worker is an indoor or outdoor worker.

Age

The representation of youth in public sector agencies and authorities decreased slightly from 6.2 per cent (10 355 employees) in 2011 to 6.1 per cent (10 323 employees) in 2012.

In local government authorities, youth representation (indoor and outdoor workers combined) decreased from 13.7 per cent in 2010 to 10.1 per cent in 2012.

Mature workers are over-represented in public employment compared with the community overall. An increase of turnover in public authorities is likely to occur in the next decade as this large employment cohort approaches retirement. As at 30 June 2012, mature workers in public sector agencies and authorities represented 50.2 per cent (85 585) of the workforce, up slightly from 50.1 per cent (83 502 employees) in 2011.

Representation of mature workers in local government authorities (indoor and outdoor combined) decreased from 43.4 per cent in 2010 to 41.5 per cent in 2012.

(DEOPE 2012)

Under-represented Groups Participation

Indigenous Australians

As at 30 June 2012, the representation of Indigenous Australians employed in public sector agencies and authorities is 2.6 per cent which remained the same as 2011. The percentage of Indigenous Australians did not change in the public sector, but there has been an increase in the number employed in the sector from 2 533 employees in 2011 to 2 749 employees in 2012. The figure reflects an overall increase in the number of employees who identify as being an Indigenous Australian. The representation is lower than the representation of working age Indigenous Australians in the community (2.8 per cent) according to ABS data from 2011.

In local government authorities, the representation of Indigenous Australian outdoor workers in 2012 was 6.1 per cent (230 employees) remaining above representative levels in the community. Representation of Indigenous Australian indoor workers remains low at 1.8 per cent (172 employees).

The number of Indigenous Australians in public sector agencies and authorities at salary ranges 7 to 10 has increased from 110 in 2011 to 129 in 2012. Overall, there is still a high concentration of this diversity group at lower salary ranges.

In 2012, of all Indigenous Australians in public sector agencies and authorities, 4.4 per cent are at salary ranges 7 to 10 and 0.5 per cent at salary ranges 9 to 10. This compares with 10.8 per cent and 3.3 per cent, respectively, for all employees.

For public sector agencies and authorities in 2012, permanency rates for Indigenous Australians are 70.5 per cent compared to 67.1 per cent for all employees.

Indigenous Australians are slightly more likely to work full-time when compared to all employees in both state and local government sectors.

People from Culturally and Linguistically Diverse (CaLD) Backgrounds

The representation of people from culturally diverse backgrounds in public sector agencies and authorities has dropped from 11.9 per cent (11 545 employees) in 2011 to 11.5 per cent (12 112 employees) in 2012.

For local government indoor workers the representation of people from culturally diverse backgrounds increased from 14.6 per cent (1 259 employees) in 2010 to 19.6 per cent (1 904 employees) in 2012. Representation of outdoor workers from culturally diverse backgrounds also increased from 11.4 per cent (400 employees) in 2010 to 16 per cent (603 employees) in 2012.

The equity index for people from culturally diverse backgrounds in public sector agencies and authorities decreased from 134 in 2011 to 128 in 2012.

The equity index for people from culturally diverse backgrounds employed in local government authorities as indoor workers increased from 108 in 2010 to 116 in 2012. For outdoor workers the equity index increased to 108 in 2012 from 103 in 2010. The salary range for outdoor workers stops at level 6.

People from culturally diverse backgrounds are well represented at senior levels. The number of people from culturally diverse backgrounds in public sector agencies and authorities at salary ranges 7 to 10 increased from 1 763 in 2011 to 1 857 in 2012.

People from culturally diverse backgrounds are more likely to work full time in both levels of government.

People with a Disability

The representation of people with a disability in public sector agencies and authorities has increased from 3.4 per cent (3 221 employees) in 2011, to 3.9 per cent (4 003 employees) in 2012, which is above community representation.

For local government indoor workers, the representation of people with a disability remains steady at 1.7 per cent (160 employees) in 2012. The percentage of local government outdoor

workers with a disability is 3.1 per cent (116 employees) in 2012, down from 3.3 per cent (115 employees) in 2010.

The equity index for people with a disability in public sector agencies and authorities increased from 101 in 2011 to 111 in 2012. This figure indicates that there is a good distribution for this diversity group in public sector agencies and authorities. This is also supported by the increase in people with a disability in salary levels 7 to 10.

The equity index for local government indoor workers with a disability increased from 74 in 2010 to 77 in 2012. The equity index for outdoor workers with a disability decreased from 91 in 2010 to 83 in 2012.

People with a disability are represented at higher levels in the full-time workforce in state government, however there is a high level of part time participation in local government.

Summary of Demographic Information

Diversity Group	Representation (%)				
	2008	2009	2010	2011	2012
Women in management	23.7	25.1	26.9	26.3	27.5
Senior executive service	23.7	23.0	26.2	26.0	27.4
Indigenous Australians	3.3	2.3	2.4	2.6	2.6
CaLD	12.4	12.8	11.9	11.9	11.5
People with a disability	4.2	2.8	2.8	3.4	3.9
Youth	4.2	2.8	2.8	3.4	3.9
Mature	6.6	6.6	6.2	6.2	6.0

Table 6 - Public Sector Representation (DEOPE 2012)

Diversity Group		Representation (%)				
		2007	2008	2009	2010	2012
Women in management	Indoor	21.4	23.6	23.3	25.0	26.7
	Outdoor	2.9	11.5	2.8	12.45	8.1
Indigenous Australians	Indoor	1.3	1.5	1.6	1.4	1.8
	Outdoor	6.2	7.9	7.1	6.4	6.1
CaLD	Indoor	11.0	13.4	13.4	14.6	19.6
	Outdoor	12.2	12.6	13.8	11.4	16.0
People with a disability	Indoor	1.6	2.1	1.9	1.8	1.7
	Outdoor	3.7	4.4	4.5	3.3	3.1
Youth	Indoor	12.3	16.1	15.3	15.0	11.4
	Outdoor	7.8	7.5	8.7	10.1	6.4
Mature	Indoor	35.8	33.8	37.1	38.7	37.2
	Outdoor	54.2	51.4	50.3	56.6	53.3

Table 7 - Local Government Representation (DEOPE 2012)

Major Challenges and Barriers

Gender Balance:

When considering both levels of government (state and local) there is a higher proportion of women than men in almost every age bracket, but they occupy less permanent positions and have a lower salary profile than men. Government has worked hard in recent years to address barriers that stand in the way for women to access leadership positions. These gender equity issues continue to be addressed by government through coordinated efforts of the Public Sector Commission (state government) and associations in local government (e.g. WALGA, LGMA).

For the public safety and corrections industries, male workers participate at higher levels in core operational roles.

Ageing Workforce:

The Public Administration workforce has a high proportion of older workers and a low proportion of youth. Future difficulties to recruit will be intensified by the wider skills shortages expected to be experienced in WA.

For the public safety industry, the reasons for the loss of mature age workers align to those in the trade – i.e. that work is physically (and often mentally) demanding. However, for public administration roles in state and local governments, the same does not necessarily apply. The loss of corporate knowledge is likely to impact on provision of services if not managed in an effective manner.

Indigenous Employment Opportunity:

Public administration sectors are ideally placed to offer exceptional employment opportunities to indigenous persons. Examples are:

- The public sector compares its workforce composition to that of the community, expecting its workforce to be representative of those who it serves.
- Local governments are geographically dispersed and offer an enormous variety of job roles suitable to indigenous workers.

Identity as an Industry:

Most occupations across the public sector fall generically under ANZSCO codes that describe corporate managerial and administrative roles (private sector). This does not reflect the specific difficulties experienced by the public sector to attract workers. As such occupations in these industries are lost in the wider application of the ANZSCO.

The situation leads to a perception that public administration sectors are not considered 'industries' in their own right. Instead, they have been labeled 'sub-sectors' of the wider business/private sector.

Population Growth:

Predictions for population growth continue to expect that the State will experience a level of sustained population expansion and this growth will in itself be a driver for additional skilled labour to provide government services, community infrastructure, policing and correctional services.

Improving Industry Profile:

The Public Administration industry sectors seek to improve the means by which industry occupations are promoted to the community, school leavers and job seekers.

It is the industry's view that promotion of the Public Sector and Local Government across the community will need to continue to highlight the breadth of work, stability and the flexible employment conditions available as well as the wide range of employment opportunities in customer service, technical, para-professional and professional roles.

Competition for skilled labour:

Resource projects demand for skilled labour from the Public Administration sector is significant, including occupations such as engineers, technicians, fixed and mobile plant operators, project managers, planners, human resources workers and managers, administrators, inspectors and OHS specialists.

Training Capacity:

There are too few training providers with the capacity to meet the Public Administration industry sectors skilling needs. The issue is magnified in regional areas.

The sectors are also constrained by government policy in relation to the funding of training for core functions. That is:

- Public sector agencies cannot access funded training for professional development of their staff. Entry level training for government qualifications is limited to traineeships only (no funded institutional delivery).
- Local Government – Due to the large number and geographic distribution of local governments the training sector has ignored the specific needs of this sector until recent times. Significant focus has been provided to Local Government by training providers in metropolitan and regional areas.
- Public Safety and Corrections – Typically enterprise RTOs, these organisations also largely fund their own entry level and professional development training.

Further, employers in the public administration sector are unable to access commonwealth funding in the form of employer incentives, workplace English language and literacy and workforce development funding. By way of example, Government Skills Australia (the Industry Skills Council) is currently holding approximately \$4 million in federal workforce development funding that cannot be accessed by the majority of the industries it represents.

Training Demand:

There is a fairly strong training culture in the public administration industry sector, however investment in training generally falls into short courses and unaccredited professional development activities.

Training providers label public administration delivery as 'thin market'.

Climate Change and Environment:

Government climate change and carbon reduction policy is driving demand for additional workforce capabilities in environmental and sustainability policy, regulation and technology applications.

Disaster response:

2012 continued the trend of a high number of natural disasters and significant emergency events. These events challenge the states capacity to manage its emergency response procedures and the interoperability of agencies and emergency organisations.

Government Workforce Planning:

The Public Sector has made significant investment in workforce planning and development through the Public Sector Commission. In 2012 the Public Sector Commission received agency workforce development plans from nearly all agencies in the state. The local government sector is embarking on a similar process, led by the Department of Local Government. The department is aiming for all local government authorities to submit workforce development plans (as part of integrated planning) by 30 June 2013.

This planning must take into account the restrictions placed upon organisations using public money. For both tiers of government, this means operating within FTE caps, Efficiency Dividends, major restructures and amalgamations.

Translators/interpreters

This sector has implemented nationally consistent qualifications through the Public Sector Training Package. It continues to work with Government Skills Australia to iron out issues surrounding implementation and the ability to recognise the competence to translate/interpret specific languages.

New and Emerging Skills

- State Government is focused on the skills of its policy officers/managers. Whilst this is not a new skill requirement, the sector has lost capacity over recent times.
- Due to the diversification of Western Australia's population there is an increasing need for translators and interpreters for existing and newly introduced languages. Further knowledge and skills are required by workers in government, public safety and corrective services to work in a manner that is appropriate and sensitive to these newly introduced cultures.
- Technology continues to enable new ways of working across the sector that requires workers to be literate.
- Intelligence and investigative processes continue to evolve in light of new technological and terrorism threats.

Occupations in Demand (ANZSCO Code)

Occupations in Demand		
ANZSCO6	Occupation	Summary
233211	Civil engineer	Civil engineers are employed extensively throughout the water sector either through direct employment or through some form of consulting or contractual arrangement. Care is required not to over state demand as in many instances contracting organisations provide their services to all industry sectors where civil engineering expertise is required.
312211	Civil engineering draftsman	The Local Government reports needs in civil engineering capability though the sector is currently undergoing major structural reform which may see councils amalgamated and the impact of which on employment opportunities is as yet unknown. The Water sector has continuing demand for civil engineering draftsmen and technicians as it seeks to mitigate the effects of climate change and adopts alternate technologies for the sourcing and processing of water.
312212	Civil engineering technician	
411711	Community worker	This occupation is in demand by the Local Government sector as it provides community support services. EUPA is unable to provide comment on this occupation beyond it being advised that there is a continual need for community workers in the local government sector where positions are difficult to fill with some regional challenges evident.
441211	Emergency service worker	This occupation is critical in the Public Safety sector. 2011 and 2012 saw a number of natural disasters and significant emergency events in the form of flooding and bushfires. These events challenged the states capacity to manage its emergency response procedures, which ultimately saw a change to ministerial responsibilities, the appointment of a new Chief Executive Officer and a new Department established which placed greater emphasis on the training of emergency services personnel and its volunteers.

Occupations in Demand		
ANZSCO6	Occupation	Summary
139912	Environmental manager	<p>This is a critical occupation in the Local Government industry sector as effective environmental management is core to the accountability requirements placed upon public governance authorities/agencies.</p> <p>However the role has become increasingly important to all sectors of the economy due to national policy on environment and climate change.</p> <p>Many local government agencies report difficulty in filling positions due to the associated crowding out effect caused by the resources sector.</p>
132311	Human resource manager	<p>This occupation is critical in the Public Administration and Local Government industry sectors. However the role has become increasingly important to all sectors of the economy.</p> <p>Many state and local government agencies report difficulty in filling positions due to the associated crowding out effect caused by the resources sector.</p> <p>State and local governments report an increasing need for HR/Organisational development expertise in the era of workforce planning.</p> <p>Human Resource Managers continue to a focus for the Public Sector Commission.</p>
135199	ICT managers not elsewhere classified	<p>This occupation is critical with a forecast strong demand due to rapid development and application of ICT technology in the Public Administration and Utilities sectors.</p> <p>The advent of the National Broadband Network will create utilisation of ICT across all sectors and as such will see greater need developing of those with management capabilities.</p>
132411	Policy and planning manager	<p>This occupation is critical in the Public Administration and Local Government industry sectors. Both sectors report a growing deficiency in policy development expertise</p>
253411	Psychiatrist	<p>This occupation as critical in the Corrective Services sector.</p> <p>EUPA is unable to provide comment on this professional occupation beyond it being advised that there is a continual and growing need for psychiatrists in the corrective services sector.</p>
272511	Social worker	<p>This occupation as critical in the Corrective Services sector.</p> <p>EUPA is unable to provide comment on this professional occupation beyond it being advised that there is a continual and growing need for social workers in the corrective services sector.</p>
232212	Surveyor	<p>This occupation is critical in the Local Government industry sector related to the provision of Public Works services.</p> <p>Many local government agencies report difficulty in filling positions due to the associated crowding out effect caused by the resources sector.</p>

272413	Translator	<p>This occupation is critical in the following industry sectors: State Government Local Government Public Safety Corrective Services</p> <p><i>Note: Translators are generally not employed directly by agencies as they are retained on a needs basis. Services are increasingly delivered through contractual arrangements. The services provided are however essential to effective community engagement and management.</i></p>
232611	Urban and regional planner	<p>This is a critical occupation in the Local Government industry sector as Urban and Regional Planning is a core provided by local government.</p>

Table 8 - Occupations in Demand for Public Administration

Workforce Development Opportunities

- Promotion of State and Local Government careers across the community will need to highlight the breadth of work, stability and flexible employment conditions available relative to a wide range of employment opportunities in customer service, technical, para-professional and professional roles
- Retention of those considering retirement will assist in lessening the loss of corporate knowledge and providing additional mentoring support for new entrants.
- The expansion of the Public Sector Traineeship programs into the regions will assist agencies to manage the attraction and retention of youth.
- The Aboriginal Employment Strategy will create sustainable benefit to participating agencies in support of the COAG agreement.
- Alternative employment arrangements such part time, work from home and transition to retirement are current strategies which can be further explored for increased workforce participation.
- Increases to the levels of prison populations are being met with construction of new infrastructure which will require additional staffing needs to be met.
- Higher numbers of migrants from CaLD backgrounds require better community representation within agencies and better community engagement and will impact upon the workload of translators and interpreters.
- EUPA Training Council linkages to the tertiary sector is at best ad-hoc and ill defined
- The Public Sector Commission launched its Employment Based Training Strategy in October 2012 – efforts now required grow the number of the apprentices, trainees and cadets employed in the sector
- The Department of Local Government requires Councils to now produce Workforce Development Plans – however effort is required to aggregate the identified needs for the purposes of presenting a complete WFD Plan for the Local Government Sector
- The recognition of Volunteers within the "Employment" Based training arrangements

VET Training Data by Qualification – Enrolments and Completion

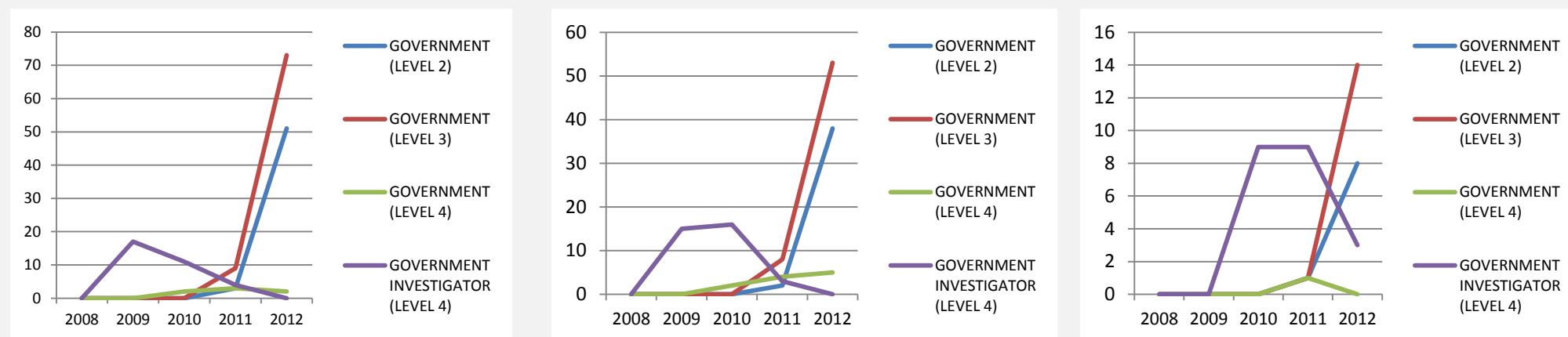
Figure 13 - VET Data for Public Administration

Commencements

In Training

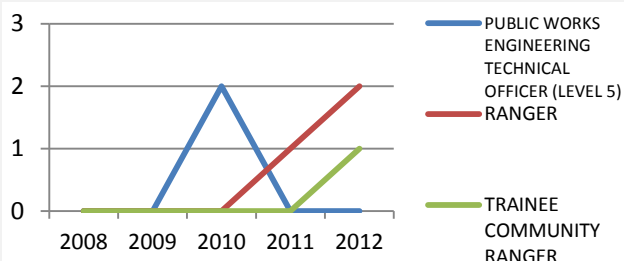
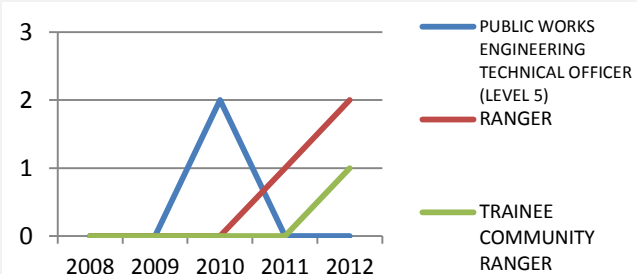
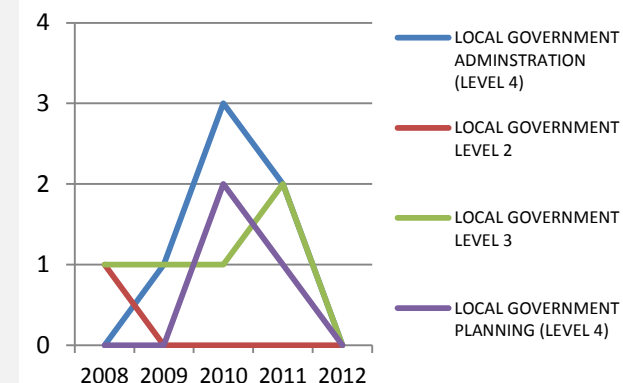
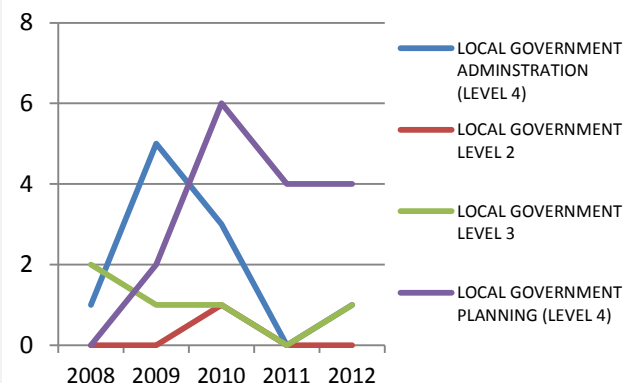
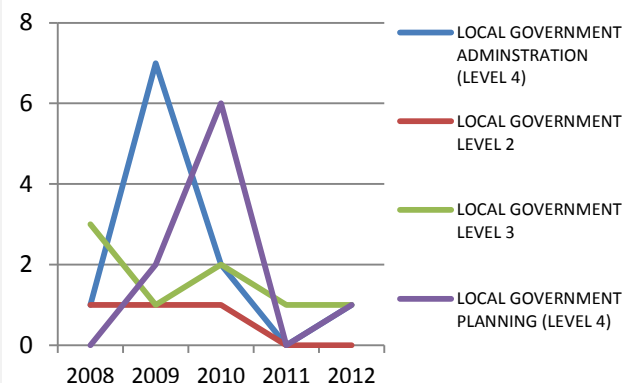
Completions

State Government Industry



The growth in enrolments in government qualifications that have resulted from the strategic direction implemented by the Public Sector Commission (transitioning centrally coordinated traineeships from business to government qualifications). The small number of enrolments in 2010 were a result of Workforce Development Funding from the Commonwealth Government.

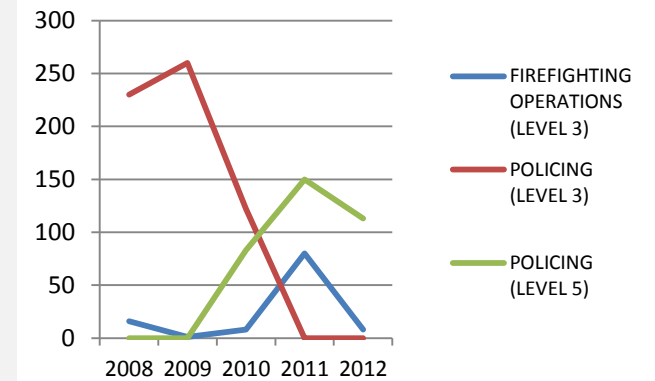
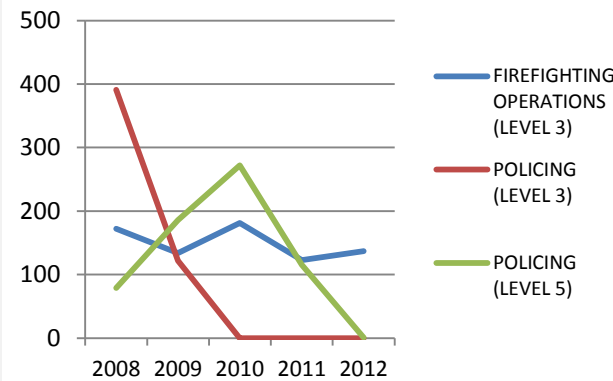
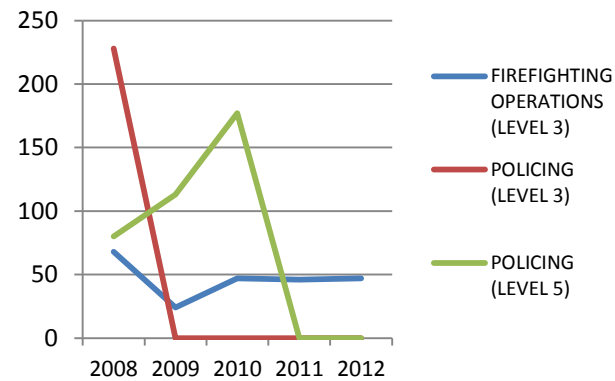
Local Government Industry



Nil

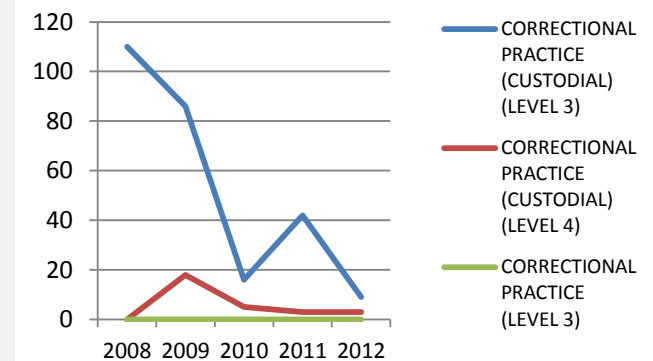
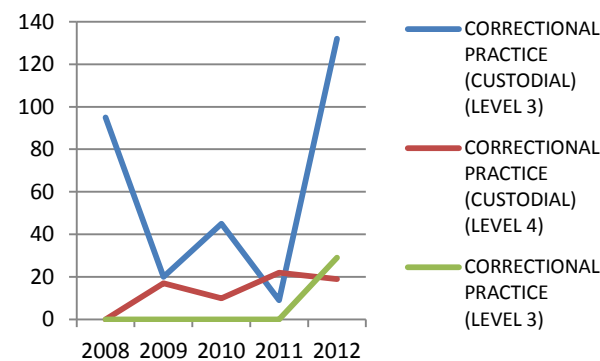
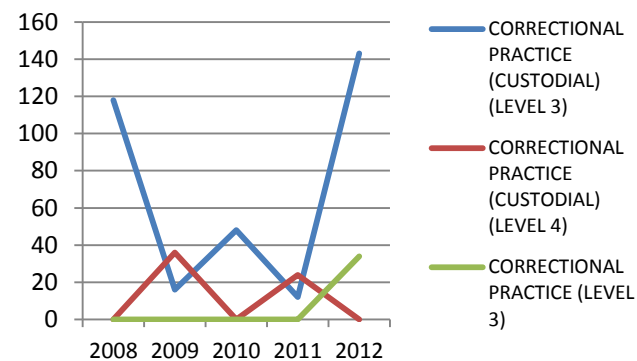
Trainee numbers in local government continue to be extremely low. The industry has retained its preference for generic business services qualifications. Traineeships for rangers were established in 2011 and have seen only 3 commencements in this time despite industry support for their establishment.

Public Safety Industry



Firefighting and policing training is largely delivered by enterprise RTOs. The decline in policing enrolments reflects a shift in the availability of traineeship funds. Initially, the Certificate III was abandoned when the Diploma took over as the traineeship qualification. However, as Commonwealth employer funds dried up the industry moved away from traineeships. The same is expected to occur in firefighting now that FESA has been established as a department of government. Therefore, it must be noted that the above statistics do not represent actual training delivery.

Corrections Industry



Enrolments of employees in the Department of Corrective Services are also affected by the removal of commonwealth employer incentives.

Traineeship numbers reported above do not represent actual numbers of workers trained.

It should be noted that the public administration sector employs many apprentices and trainees in occupations that are outside of EUPA's scope and would be captured in environmental scans of other Training Councils.

SECTION 4 INDUSTRY ISSUES AND STRATEGIES

Skilling WA: Strategic goal 1

Increase participation in the workforce particularly among the under-employed and disengaged, mature-aged workers, Aboriginal and Torres Strait Islander and other under-represented groups

Issue (from Section 3)	Strategy	Skilling WA Priority Action
The Public Sector Commission launched its Employment Based Training Strategy in October 2012 – efforts now required grow the number of the apprentices, trainees and cadets employed in the sector	Research and recommend a preferred public sector "Cadetship" model Seek to establish the identified "cadetships" within the EVAC arrangement	1.4 1.1.2

Skilling WA: Strategic goal 2

Supplement the Western Australian workforce with skilled migrants to fill employment vacancies unable to be filled by the local workforce and address those factors which support a growing population.

Issue (from Section 3)	Strategy	Skilling WA Priority Action
ANZSCO definitions do not adequately describe job roles in some industry sectors EUPA represents	Identify the job roles from each of the EUPA industry sectors not recognized within the ANZSCO definitions. Engage the respective National Industry Skills Council in formulating a response to the ABS for the inclusion of the identified job role within future edition of the ANZSCO definitions	2.3 2.1.1 2.1.5

Skilling WA: Strategic goal 3

Attract workers with the right skills to the Western Australian workforce and retain them by offering access to rewarding employment and a diverse and vibrant community and environment to live in.

Issue (from Section 3)	Strategy	Skilling WA Priority Action
National Licensing of the Electrical Trades is likely to be introduced in 2013 – Effort required to ensure training providers in WA delivery the requisite qualifications for the proposed licensing outcome	Establish an Electrical Fitters Apprenticeship utilizing the Electrotechnology Training Package qualification in readiness for the implementation of national licensing	3.1.3

Skilling WA: Strategic goal 4

Provide flexible, responsive and innovative education and training which enables people to develop and utilise the skills necessary for them to realise their potential and contribute to Western Australia's prosperity.

Issue (from Section 3)	Strategy	Skilling WA Priority Action
More than 50% of electrical workers licenses on issue in WA are held by electricians not working in their trade and there is anecdotal evidence that suggests the electrical trades are utilized as pre-requisite qualifications to occupations that do not require the individual to utilize their electrician skills.	<p>Seek to undertake a project to determine:</p> <ul style="list-style-type: none"> those industries targeting electricians to fill job roles not requiring electrical skills; the range of occupations licensed electricians seek in preference to their trade; why licensed electricians seek alternate employment opportunities; and what programs could be initiated to attract licensed electricians back to their trade 	3.1.3 4.2.1 4.2.3
EUPA Training Council linkages to the tertiary sector is at best ad-hoc and ill defined	<p>Identify where the cross over exists for occupations and qualifications relevant to the EUPA industry sectors in the arena</p> <p>Identification of tertiary institutes delivering programs relevant to EUPA industry sectors</p> <p>Establishment of a stakeholder database relevant to the identified professions and tertiary education providers</p>	4.1.2 4.3.5

Skilling WA: Strategic goal 4 continued

Provide flexible, responsive and innovative education and training which enables people to develop and utilise the skills necessary for them to realise their potential and contribute to Western Australia's prosperity.

Issue (from Section 3)	Strategy	Skilling WA Priority Action
<p>The Strategic Energy Initiative <i>Energy2031</i> seeks to enhance the skills of the State's energy industry workforce to make sure the workforce is well placed to cater to the emerging needs of the industry.</p> <p>Strategies from the Strategic Energy Initiative <i>Energy2031</i> (pg25)</p>	<p>Undertake activities to address the following stated goals of the Strategic Energy Initiative <i>Energy 2031</i>:</p> <p>"Creating partnerships between business, Governments and education institutions to map the current and future skill needs for the energy sector and identify parties best placed to fulfill those needs".</p> <p>"Recognising the training and skills development requirements of the State's energy sector in Government policies and initiatives</p>	<p>4.1</p> <p>4.1.1</p> <p>4.1.2</p> <p>4.1.3</p>
<p>The Waste sector in WA is not engaged in nationally recognized training arrangements</p>	<p>EUPA seek to enter into a Strategic Partnership with the Waste Authority to undertake workforce development activities with enterprises and so increase the update of nationally recognized training and funding opportunities</p>	<p>4.2.1</p> <p>4.2.3</p>
<p>The Training Accreditation Council has recommended that EUPA instigate a project aimed at addressing the quality of RTO processes related to the gathering of workplace evidence for electrical apprentices</p>	<p>Act on the recommendations of the Training Accreditation Council and produce Good Practice Guide to the gathering of Workplace Evidence for RTOs engaged in electrical apprentices training and assessment</p>	<p>4.3</p>
<p>Government commitments on climate change will require refrigeration and air conditioning workers who are currently licensed to handle (synthetic) refrigerants on stationary refrigeration and air conditioning systems to re-train to equip them to work with natural refrigerants</p>	<p>Engage with the industry, RTOs and the national ISC to secure Workforce Development Funding for the provision of reskilling refrigeration and air conditioning workers in the use of "Natural Refrigerants"</p>	<p>4.3.6</p>

Skilling WA: Strategic goal 4 continued.

There are too few Registered Training Organisations servicing the industry sectors EUPA represents especially in regional locations A Gas Distribution Technician apprenticeship was established in 2011 however no RTO has yet committed to delivery of the respective qualification through an apprenticeship pathway	Engage with regional RTOs to build capacity and capability to support those industry sectors EUPA represents. Seek to increase RTO capacity to service the training requirements of the Gas sector apprenticeships	4.1 4.1.3 4.3.1
EUPA Training Council linkages to the tertiary sector is at best ad-hoc and ill defined	Identify where the cross over exists for occupations and qualifications relevant to the EUPA industry sectors in the arena Identification of tertiary institutes delivering programs relevant to EUPA industry sectors Establishment of a stakeholder database relevant to the identified professions and tertiary education providers	4.1.2 4.3.5

Skilling WA: Strategic goal 5

Plan and coordinate a strategic State Government response to workforce development issues in Western Australia.

Issue (from Section 3)	Strategy	Skilling WA Priority Action
The Department of Local Government requires Councils to now produce Workforce Development Plans – however effort is required to aggregate the identified needs for the purposes of presenting a complete WFD Plan for the Local Government Sector	Engaged with the Department of Local Government to aggregate the findings of individual Local Government's workforce development plans into a consolidated Workforce Development Plan for the whole of the sector	5.2.5
Volunteers are not recognized within the "Employment" Based training arrangements	Research and quantify the economic and social impact "volunteers" have on the State – relevant to the industry sectors EUPA represents. Engage with DFES and DTWD to commence discussions to identify mechanisms by which volunteers can be recognized for access to funded training	5.2.6

SECTION 5 RECOMMENDED PRIORITY ACTION PLAN

Skilling WA Strategic Goal 1: Strategy from Section 4

Recommended Priority Action(s)	Steps to Implement Actions	Priority	Date to be completed
<p>Research and recommend a preferred public sector "Cadetship" model</p> <p>Seek to establish the identified "cadetships" within the EVAC arrangement</p>	<p>Identify and secure funding to undertake research project</p> <p>Retain consultant assistance to undertake the project.</p> <p>Collaborate with the PSC for project completion</p> <p>PSC to facilitate consultant access to agencies.</p> <p>Report and suggested model/s approved by the Public Administration Industry Working Group</p> <p>EVAC application for the establishment of identified "cadetships" to be produced and submitted.</p>	High	September 2013
Lead Agency: Public Sector Commission, STB, EUPA			

Skilling WA Strategic Goal 2: Strategy from Section 4

Recommended Priority Action(s)	Steps to Implement Actions	Priority	Date to be completed
<p>Identify the job roles from each of the EUPA industry sectors not recognized within the ANZSCO definitions.</p> <p>Engage the respective National Industry Skills Council in formulating a response to the ABS for the inclusion of the identified job role within future edition of the ANZSCO definitions</p>	<p>Identify occupational roles for each of the sectors EUPA represents that do not have an ANZSCO code.</p> <p>Refer above information to the respective ISC and request action.</p> <p>Engage with the ISCs to progress submissions to the ABS.</p>	Low	On going 2013
Lead Agency: EUPA, GSA, E-Oz			

Skilling WA Strategic Goal 3: Strategy from Section 4

Recommended Priority Action(s)	Steps to Implement Actions	Priority	Date to be completed
<p>Establish an Electrical Fitters Apprenticeship utilizing the Electrotechnology Training Package qualification in readiness for the implementation of national licensing</p>	<p>EVAC application for the establishment of the electrical fitter apprenticeship to be produced and submitted.</p> <p>Advise industry and RTOs of outcome of the EVAC process</p>	High	June 2013
Lead Agency: EUPA, National Electrical Communications Association, STB			

Skilling WA Strategic Goal 4: Strategy from Section 4

Recommended Priority Action(s)	Steps to Implement Actions	Priority	Date to be completed
<p>Seek to undertake a project to determine:</p> <ul style="list-style-type: none"> those industries targeting electricians to fill job roles not requiring electrical skills; the range of occupations licensed electricians seek in preference to their trade; why licensed electricians seek alternate employment opportunities; and what programs could be initiated to attract licensed electricians back to their trade 	<p>Engage DTWD in discussions on proposed a project and potential funding options.</p> <p>Facilitate discussions between DTWD and Office of Energy Safety to secure access to the database of current electrical workers license holders (various options)</p> <p>Contact all electrical workers license holders (survey questions to be determined) to solicit required information</p> <p>Analyze and report survey findings</p> <p>Engage RTOs in the design of an appropriate program aimed at electricians returning to their trade.</p>	Moderate	December 2013
Lead Agency: DTWD, Office of Energy Safety, EUPA			
<p>Identify where the cross over exists for occupations and qualifications relevant to the EUPA industry sectors in the arena</p> <p>Identification of tertiary institutes delivering programs relevant to EUPA industry sectors</p> <p>Establishment of a stakeholder database relevant to the identified professions and tertiary education providers</p>	<p>Review all WA tertiary institutions delivery relative to the industry sectors EUPA represents</p> <p>Contact each institution and confirm interest in building cooperative arrangements</p> <p>Produce and maintain a database of contact relevant to tertiary delivery</p>	Moderate	June 2013
Lead Agency: EUPA			

Engage with regional RTOs to build capacity and capability to support those industry sectors EUPA represents. Seek to increase RTO capacity to service the training requirements of the Gas sector apprenticeships	Conduct RTO network meetings and Invite regional RTO attendance Visit known regional RTOs and determine capacity to support training delivery to the EUPA industry sectors. Encourage RTOs to work with local industry to provide training opportunity. Facilitate RTO networking opportunities Explore public – private partnerships for delivery of training services.	Moderate	Through- out 2013
Lead Agency: EUPA, RTOs			
Undertake activities to address the following stated goals of the Strategic Energy Initiative <i>Energy 2031</i> : “Creating partnerships between business, Governments and education institutions to map the current and future skill needs for the energy sector and identify parties best placed to fulfill those needs”. “Recognising the training and skills development requirements of the State's energy sector in Government policies and initiatives	Conduct detailed research of the utilities sectors (electricity supply and gas) to identify current and future skill needs. Facilitate discussions between industry stakeholders for development of public – private partnerships aimed at provision of skilling opportunities Liaise with the Office of the State Utilities and report on skills development opportunities in the sector so as to influence policy development	High	Throughout 2013/14
Lead Agency: EUPA, RTOs, DTWD, OSU			
EUPA seek to enter into a Strategic Partnership with the Waste Authority to undertake workforce development activities with enterprises and so increase the update of nationally recognized training and the industry's' access funded training opportunities	Submit an application for SWIS funding to undertake a project to conduct workforce development in Waste Enterprises and secure funding commitment from the Waste Authority Retain expertise to undertake the project Develop a detailed project methodology and implement activities according to the plan Report outcome against agreed KPIs to the Waste Authority	High	Ongoing 2013/14

Lead Agency: EUPA, WA Waste Authority, Waste Management Association, Waste Employers			
Act on the recommendations of the Training Accreditation Council and produce Good Practice Guide to the gathering of Workplace Evidence for RTOs engaged in electrical apprentices training and assessment	<p>Contact al electrical RTO and seek to identify good practice models for gathering of workplace evidence.</p> <p>Undertake desktop research</p> <p>Draft a good practice guide for comment</p> <p>Finalise the guide for distribution and sign of by TAC</p>	High	December 2013
Lead Agency: EUPA, RTOs, Training Accr4editation Council			
Engage with the industry, RTOs and the national ISC to secure Workforce Development Funding for the provision of reskilling refrigeration and air conditioning workers in the use of "Natural Refrigerants"	<p>Hold discussions on this issue with Polytechnic West</p> <p>Identify industry demand for skilling of workers in this area</p> <p>In association with Polytechnic West submit an application for workforce development funding through the ISC</p> <p>Secure funding of sufficient individuals to meet industry needs.</p>	Low	June 2013
Lead Agency: EUPA, Polytechnic West, Industry			

**Skilling WA Strategic Goal 5:
Strategy from Section 4**

Recommended Priority Action(s)	Steps to Implement Actions	Priority	Date to be completed
Engaged with the Department of Local Government to aggregate the findings of individual Local Government's workforce development plans into a consolidated Workforce Development Plan for the whole of the sector	Seek the assistance of DTWD to facilitate access to the workforce development plans produced by Local Government agencies which are held by the Department of Local Government. Analyze these plans and produce a whole of sector plan	Low	Throughout 2013
Lead Agency: EUPA, DTWD, Department of Local Government			
Research and quantify the economic and social impact "volunteers" have on the State – relevant to the industry sectors EUPA represents. Engage with DFES and DTWD to commence discussions to identify mechanisms by which volunteers can be recognized for access to funded training	Engage DTWD on this initiative to determine how "volunteers" are or can be identified within the priority occupations Undertake research to quantify the economic and social impact "volunteers" have on the State – relevant to the industry sectors EUPA represents. Facilitate discussions and review of policy positions on the funding of volunteer training	Moderate	Throughout 2013
Lead Agency: EUPA, Department of Fire and Emergency Services, DTWD			

SECTION 6 PLAN ADMINISTRATION

Plan Contact

This plan is maintained by the Executive Director for the Electrical Utilities and Public Administration Training Council. Feedback regarding this plan should be made in writing to:

- a Email: admin@eupa.com.au
- b Mail: PO Box 597 Balcatta
- c Office phone number: (08) 9240 2688

Review Requirements and Issue History

Schedule 2 of the Service Agreement requires that this plan is reviewed and updated annually.

This issue entirely supersedes the previous issue of the plan. Superseded issues should be destroyed, or clearly marked as superseded and removed from general circulation and the Training Council website.

Issue No.	Year Approved	Comments/Summary of Main Changes
1	2013	Major review and production utilizing DTWD approved template 2012

Distribution List

This plan is issued electronically on the Training Council website after it is approved. Print/paper copies are provided as follows (if applicable).

Organisation	Position
Department of Training and Workforce Development	

Consultation for this Issue

The review of this issue of this plan was coordinated by the Chief Executive Officer for the Electrical, Utilities and Public Administration Training Council Inc (EUPA). This issue was updated/re-written as part of the annual review process and the main round of consultation with industry representatives and the EUPA Training Council Board of Management, its eight industry working groups and industry stakeholders occurred in later half of 2012 and the plan was approved at the Board meeting of 11 April 2013.

Communications Plan Summary

Once the plan is approved, its update will be:

- a endorsed by the EUPA Training Council Board of Management
- b noted by the Department of Training and Workforce Development
- c sent to all persons listed on the Distribution List (paper copies)
- d posted on the EUPA Training Council website

Validation of this Plan

Arrangements in this plan will be validated within the annual review EUPA Board of Management strategic planning cycle.

SECTION 7 APPENDICES

Appendix 1 – Occupational Licensing as at 1 January 2013

Name of Occupation	Name of License/ Registration/ Permit	Name of Licensing/Regulatory Authority	Title of Act	What does this license enable the holder to do?
Electrician	Electrical Worker License Types of License: <ul style="list-style-type: none"> • Electrical • Electrical Contracting, • Electrical Installing • Electrical Training, • Restricted Electrical 	Electrical Licensing Board EnergySafety carries out technical and safety regulation of electrical and most gas activities throughout Western Australia , including the activities of electricity supply network operators and gas distribution license holders	Electricity Act 1945 Electrical (Licensing) Regulations 1991 Energy Co-ordination Act 1994 Energy Co-ordination (Designation of Inspectors) Regulations 1995	Electricians are licensed for up to 5 years and must carry their license card with them and produce it when required.
Electrical Fitter	Electrical Worker (restricted to fitting)	Energy Safety/ Electrical Licensing Board	As above	Electrical Fitters make and repair electrical equipment, motors, instruments and appliances. Fitters differ from electricians in that they can also perform machining and overhauling of equipment.
Electrical Contractor	Electrical Contractors License	Energy Safety/ Electrical Licensing Board	Electricity Act 1945 Electrical (Licensing) Regulations 1991	
Electrician - for the installation of solar panels	Clean Energy Council Accreditation	Clean Energy Council	Clean Energy Council	Must have completed the relevant units of competency from the trade related training package. Must have been an electrician initially with further training for installation of solar panels.
Apprentice Electrician	Electrical Training License	Energy Safety/ Electrical Licensing Board (see1 above)	Electricity Act 1945 Electrical (Licensing) Regulations 1991	Training License

Name of Occupation	Name of License/ Registration/ Permit	Name of Licensing/Regulatory Authority	Title of Act	What does this license enable the holder to do?
Apprentice Electrical Fitter	Electrical Worker (restricted to fitting)	Energy Safety/ Electrical Licensing Board	Electricity Act 1945 Electrical (Licensing) Regulations 1991	
Plumbers Instrumentation Technicians Air-conditioning and Refrigeration Mechanics	Restricted Electrical License/s (various)	Energy Safety/ Electrical Licensing Board	Electricity Act 1945 Electrical (Licensing) Regulations 1991	To carry out electrical work related to the Air-conditioning or refrigeration equipment – restricted by license type For an individual who carries out work in relation to RAC equipment (this includes installing, commissioning, servicing and maintaining RAC equipment)
Air-conditioning and Refrigeration Mechanics	Refrigerant handlers license / registration	Australian Refrigeration Council Energy Safety (See 1 above)	Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* Regulations 1995	To handle a refrigerant for any work in the refrigeration and air conditioning industry, other than the automotive industry.
Apprentice Air conditioning and Refrigeration Mechanics	Refrigerant handlers license and registration training license	Australian Refrigeration Council	Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* Regulations 1995	To handle a refrigerant while undertaking training and/or assessment in a classroom setting and at your work place under supervision. The supervisor must be the holder of a license that entitles them to engage in work for which the licensee is being trained. This license is valid for the period of training, which can be up to one year.
Domestic Refrigeration and Air Conditioning Appliance	Domestic Refrigeration and Air Conditioning Appliance License (2 years)	Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* Regulations 1995	Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* Regulations 1995	To handle a refrigerant for either or both of the following: <ul style="list-style-type: none"> any work on domestic refrigeration or air conditioning equipment any work on commercial stand alone refrigeration equipment

Name of Occupation	Name of License/ Registration/ Permit	Name of Licensing/Regulatory Authority	Title of Act	What does this license enable the holder to do?
Data and Telecommunication Technicians (Cabler)	ACMA Open Registration Cabling License Requires authorisation by asset owner if connected to electricity distribution network (i.e. Horizon, Western Power)	Energy Safety/ Electrical Licensing Board Australian Communications and Media Authority	Electricity Act 1945 Electrical (Licensing) Regulations 1991	Install, maintain and repair data transmission, aerial lines, conduits, cable, radio antennae and telecommunications equipment and appliances.
Electricity Power Plant operators	HRW License to operate A STEAM TURBINE	WorkSafe	Occupational Safety and Health Act 1984	Pressure equipment operation - basic, intermediate and advanced boiler operation; turbine operation; reciprocating steam engine operation.
Electricity Power Plant operators	STEAM BOILER High Risk License	WorkSafe	Occupational Safety and Health Act 1984	Pressure equipment operation - basic, intermediate and advanced boiler operation; turbine operation; reciprocating steam engine operation.
Lineworker	Requires authorisation by asset owner (i.e. Horizon, Western Power)	Energy Safety	Electricity Act 1945 Electricity (Supply Standards and System Safety) Regulations 2001 Electricity Regulations 1947 - Network operator service standards, line-worker and electrical worker safety, appliance energy efficiency	Electricity Supply Transmission / Distribution: Cable Joints. EWP; Pole top rescue; Confined space

Name of Occupation	Name of License/ Registration/ Permit	Name of Licensing/Regulatory Authority	Title of Act	What does this license enable the holder to do?
Water Operators	5C and 26D Licenses	Department of Water	Rights in Water and Irrigation Act 1914 and Licenses to clear native vegetation under the Country Areas Water Supply Act 1947	License 5C: allows the license holder to “take” water from a watercourse, wetland or underground source. License 26D: commence, construct, enlarge, deepen or alter an artesian well or commence construct, enlarge, deepen or alter any non-artesian well in a proclaimed Groundwater area.
Drainers	Tradesperson's (Drainage Plumbing License)	Plumbers Licensing Board	Rights in Water and Irrigation Act 1914 and Licenses to clear native vegetation under the Country Areas Water Supply Act 1947	License 5C: allows the license holder to “take” water from a watercourse, wetland or underground source. License 26D: commence, construct, enlarge, deepen or alter an artesian well or commence construct, enlarge, deepen or alter any non-artesian well in a proclaimed Groundwater area.
Waste Operators	Asbestos Control License <ul style="list-style-type: none"> • Restricted • Unrestricted Over 10 sqm asbestos must be removed by a licensed and trained individual /business	WorkSafe (Asbestos Removal)	Code of Practice for Management and Control of Asbestos in Workplaces (NOHSC:2018(2005))	Unrestricted – allows removal of all types of asbestos. Restricted – Commenced June 2010 allows removal of amounts exceeding 10square metres of bonded (non-friable) asbestos.
Waste Operators	Demolition License	WorkSafe (Demolition license)	Occupational Safety and Health Regulations 1996	The following are general conditions applicable to all demolition licences: <ul style="list-style-type: none"> • every employee engaged to do demolition work has, or will be trained before the demolition work commences, in safe methods of demolition work by a registered training organisation • all demolition work will be directly supervised by a competent person.

Name of Occupation	Name of License/ Registration/ Permit	Name of Licensing/Regulatory Authority	Title of Act	What does this license enable the holder to do?
Gas Fitter TYPE B (industrial) gas appliances	Gasfitting Permit (Classes: with Restrictions for an APPRENTICE) Class I - Covers gasfitting work on a consumer's gas installation associated with a Type B appliance [Industrial - including all Type B appliances - installation, commissioning and servicing]; or on piping that has an operating pressure of more than 200 kPa, not being gasfitting work referred to in paragraph (a) or classified as Class E or P	Energy Safety -	<i>Gas Standards Act 1972</i> Gas Standards (Gas fitting and Consumer Gas Installations) Regulations 1999 Gas Standards (Gas Supply and System Safety) Regulations 2000 <i>Fuel, Energy and Power Resources Act 1972</i>	An appliance that has a maximum hourly input rate exceeding 10 mega joules, but is neither a Type B appliance maintenance and repair
Restricted heat pump (split system) installation and decommissioning	Restricted heat pump (split system) installation and decommissioning License (2 years)		Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* Regulations 1995	To handle a refrigerant for the installation and decommissioning of any of the following: <ul style="list-style-type: none"> • a single-head split system air conditioner of less than 18kW; • a 2-part hot water heat pump of less than 18kW; • a 2-part swimming pool heat pump of less than 18kW.

SECTION 8 LIST OF TABLES

Table 1 - EUPA Training Council industry sectors and training packages.....	7
Table 2 - Occupations in Demand for Electrical	21
Table 3- Utilities Occupations	34
Table 4 - Major stakeholders in Utilities.....	34
Table 5 - Occupations in Demand for Utilities	41
Table 6 - Public Sector Representation	58
Table 7 - Local Government Representation.....	58
Table 8 - Occupations in Demand for Public Administration.....	63
Table 9 Terms	86
Table 10 Acronyms	86

SECTION 9 GLOSSARY

The following terms that are used in this plan are particular to this Training Council.

Table 9 - Terms

Term	In the context of this plan, this means:

Table 10 – Acronyms

Acronym	Full Title
ABS	Australian Bureau of Statistics
ACELG	Australian Centre of Excellence for Local Government
AFP	Australian Federal Police
ALGA	Australian Local Government Association
ALGWA	Australian Local Government Women's Association
ANZSCO	Australia and New Zealand Standard Classification of Occupations
ANZSIC	Australia and New Zealand Standard Industry Classification
ASU	Australian Services Union
C&D	Construction and Demolition Waste
C&I	Commercial and Industrial Waste
CaLD	Culturally and Linguistically Diverse
CEPU	Communications, Electrical and Plumbing Union
COAG	Council of Australian Governments
CSA	Civil Services Association
DBNGP	Dampier, Bunbury Natural Gas Pipeline
DEC	Department of Environment and Conservation
DEEWR – now DIISRTE	Department of Education, Employment and Workplace Relations – now Department of Industry, Innovation, Science, Research and Tertiary Education
DEOPE	Director of Equal Opportunity in Public Employment
DFES	Department of Fire and Emergency Services
DTWD	Department of Training and Workforce Development
EATC	Engineering and Automotive Training Council
ELB	Electrical Licensing Board
E-Oz	Energy Skills Australia
ERA	Economic Regulation Authority

Acronym	Full Title
ETU	Electrical Tradeworkers Union
EUPA	Electrical Utilities and Public Administration Training Council
EVAC	Establishment and Variation of Apprenticeships Committee
FESA	Fire and Emergency Services
FTE	Full Time Equivalent
GGP	Goldfields Gas Pipeline
GSA	Government Skills Australia
HRMOIR	Human Resource Minimum Obligatory Requirements
ICA	Information and Communication Technology
ICT	Integrated Telecommunications
IPWEA	Institute of Public Works Engineering Australia
ISC	Industry Skills Council
LGMA	Local Government Managers Association
LGRCEU	Local Government, Racing, Cemeteries Employees Union
LPG	Liquid Petroleum Gas
MSW	Municipal Solid Waste
NBN	National Broadband Network
NECA	National Electrical Communications Associations
NOLA	National Occupational Licensing Authority
PSC	Public Sector Commission
RTO	Registered Training Organisation
SEI	Strategic Energy Initiative
SES	Sate Emergency Service
SPOL	State Priority Occupation List
STB	State Training Board
TAC	Training Accreditation Council
WALGA	WA Local Government Association
WAPOL	Western Australian Police

SECTION 10 OCCUPATIONS IN DEMAND PROFILES

ANZSCO	Occupation Descriptor	Summary
341111	Electrician (general)	EUPA identifies this occupation as critical in the electrical and utilities sectors. 341111 Electrician (general) is inclusive of the separate trades of "Electrician" and "Electrical Fitter"
341112	Electrician (special class)	EUPA identifies this occupation as critical in the electrical and utilities sectors. Electrician (special class) refers to an electrician who is employed to undertake specific specialised work which generally requires further training
342211	Electrical linesworker	EUPA identifies this occupation as critical in the Utilities sector of electricity supply. 342211 Electrical Linesworker encompasses: Transmission Lineworker Distribution Lineworker Rail Traction lineworker
232611	Urban and regional planner	EUPA identifies this as a critical occupation in the Local Government industry sector as Urban and Regional Planning is a core provided by local government.
233311	Electrical engineer	EUPA identifies this occupation as critical in the electrical sector There has been a significant increase in the number of Electrical Engineers working in WA over the past ten years. Likewise the numbers of Electrical Draftspersons and Technicians continue to grow.
312212	Civil engineering technician	EUPA identifies this occupation as critical in the Water and Local government sectors. EUPA does not have primary responsibility for Civil engineering draftspersons or technicians - refer Construction
253411	Psychiatrist	The EUPA Workforce Development Plan identifies this occupation as critical in the Corrective Services sector. EUPA does not have primary responsibility for Psychiatrists - refer CSHE
272511	Social worker	EUPA identifies this occupation as critical in the Corrective Services sector. EUPA does not have primary responsibility for Social Workers - refer CSHE
232212	Surveyor	EUPA identifies this occupation as critical in the Local Government industry sector related to the provision of Public Works services. Many local government agencies report difficulty in filling positions due to the associated crowding out effect cause

272413	Translator	<p>EUPA identifies this occupation as critical in the following industry sectors it represents:</p> <p>State Government Local Government Public Safety Corrective Services</p> <p>Note: Translators generally not employed directly by agencies</p>
139912	Environmental manager	EUPA identifies this occupation as critical in the Local Government industry sector as effective environmental management is core to the accountability requirements placed upon public governance authorities/agencies.
311412	Earth science technician	<p>EUPA identifies this occupation as critical in the following industry sectors it represents:</p> <ul style="list-style-type: none"> • Water • Waste
411711	Community worker	<p>EUPA identifies this occupation as in demand by the Local Government sector as it provides community support services.</p> <p>EUPA does not have primary responsibility for Community Workers - refer CSHE</p>
441211	Emergency service worker	<p>The EUPA Workforce Development Plan identifies this occupation as critical in the Public Safety sector.</p> <p>2011 and 2012 saw a number of natural disasters and significant emergency events in the form of flooding and bushfires.</p>
591113	Purchasing officer	<p>Included in the EUPA workforce development plan</p> <ul style="list-style-type: none"> • Demographics – Ageing workforce • Retention of workers, including regional areas • Competition between industries
233111	Chemical engineer	Included in the EUPA workforce development plan as highly relevant to the Utilities sectors of Gas, Water and Waste.
233512	Mechanical engineer	<p>Identified in the EUPA workforce development plan as required in the utilities industry sectors of Electricity Supply - Generation, Gas Supply Water and Waste.</p> <p>EUPA does not have primary responsibility for Mechanical Engineers - refer EATC</p>
233513	Production or plant engineer	<p>Identified in the EUPA workforce development plan as required in the utilities industry sectors of Electricity Supply - Generation, Gas Supply, Water and Waste.</p> <p>EUPA does not have primary responsibility for Production or Plant Engineers</p>
221111	Accountant (general)	EUPA identifies this as a critical occupation in the Public Administration and Local Government industry sectors as effective financial management is core to the accountability requirements placed upon public governance authorities/agencies. Accountants a

233211	Civil engineer	<p>EUPA identifies this as a critical occupation in the Utilities industry sector (Water).</p> <p>Civil engineers are employed extensively throughout the water sector either through direct employment or through some form of consulting or contractual arrangement.</p>
312211	Civil engineering draftsman	<p>EUPA identifies this occupation as critical in the Water and Local government sectors.</p> <p>EUPA does not have primary responsibility for Civil engineering draftspersons or technicians - refer Construction</p>
132311	Human resource manager	<p>EUPA identifies this occupation as critical in the Public Administration and Local Government industry sectors.</p> <p>The role has become increasingly important to all sectors of the economy.</p> <p>Many state and local government agencies report difficulty in fill</p>
132411	Policy and planning manager	<p>EUPA identifies this occupation as critical in the Public Administration and Local Government industry sectors.</p> <p>Both sectors report a growing deficiency in policy development expertise</p>
135199	ICT managers not elsewhere classified	<p>EUPA identifies this occupation as critical in strong demand due to rapid development and application of ICT technology in the Public Administration and Utilities sectors.</p> <p>The advent of the National Broadband Network will create opportunities not yet determined</p>
272412	Interpreter	<p>EUPA identifies this occupation as critical in the following industry sectors it represents:</p> <p>State Government Local Government Public Safety Corrective Services</p> <p>Note: Interpreters are generally not employed directly by agencies</p>