EUPA

ELECTRICAL UTILITIES AND PUBLIC ADMINISTRATION

TRAINING COUNCIL INCORPORATED

Industry Workforce Development Plan **2010**

EUPA

Forward

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

It is recognised that the resources sector will be the most significant economic driver for the state over the next ten years. However, EUPA is committed to ensuring the needs of the industries it represents are also recognised by government as essential to state development.
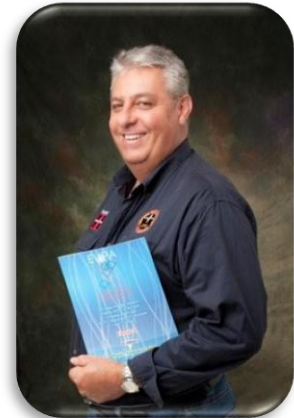
EUPA has an industry coverage which can be seen as the foundation for all other sectors of the Western Australian economy. Industry from all corners of the state rely upon the sectors EUPA services to provide social infrastructure, administer government services, build and maintain public utilities, enable power and provide community safety.

Under the direction of the Department of Training and Workforce Development (the Department), EUPA has compiled individual *Environmental Scans* and this *Workforce Development Plan* in consultation with our stakeholders. The environmental scans and this workforce development plan serve to inform the Department of matters that impact on the sustainability of each of EUPA's industry sectors and the proposed strategies and actions to be championed by EUPA on their behalf.

The scans detail strengths as well as difficulties that will be encountered by each of the industries in their efforts to attract and retain the right people with the right skills. The success of this task will ensure that Western Australia continues to forge ahead in an environment which is influenced by issues such as global economic uncertainty, climate change and changing population demographics.

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

Joe Fiala
Chairman
EUPA Training Council

Table of Contents

EUPA

List of Tables

List of Figures

List of Attachments

Introduction

This 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).

It has been developed through the application of a number of research and consultation methodologies where EUPA staff members undertook significant desk top research, conducted industry surveys and consulted stakeholders in all regional locations.

EUPA Board members and members of the eight EUPA industry working groups were then consulted to validate the draft plan prior to its presentation to the Department.

This industry workforce development plan for the Electrical, Utilities and Public Administration industry sectors provides an overview of each industry sector EUPA represents. It explores the workforce development issues likely to impact upon each sector over the coming five year period and it suggests strategies to be implemented by EUPA and other agencies to address these issues.

The suggested strategies will be reviewed on an annual basis and they will become the basis for EUPA's continued work in servicing the workforce development and training needs of the industry sectors it represents.

Document Structure

This workforce development plan is presented in three parts as follows:

Part 1	Electrical incorporating: Electronics, Instrumentation and Telecommunications
Part 2	Utilities incorporating: Electricity Supply (Generation and Transmission Distribution and Rail) Water, Gas, Waste
Part 3	Public Administration incorporating: Public Sector, Public Safety, Corrective Services Local Government

Each part contains the following:

1. A summary of an "Environmental Scan" produced for each industry sector. The full environmental scans can be viewed on the EUPA web site www.eupa.com.au

2. The identified labour and skill needs for each of the sectors.

3. Workforce development issues, barriers and opportunities evident in each of the industry sectors.

4. An Action Plan with identified priority actions for each sector under the themes of:

- Labour Market and Supply
- Workforce Participation
- Planning and Co-ordination
- Attraction and Retention
- Training and Productivity

EUPA

Background

The Chamber of Commerce and Industry (CCI) in its discussion paper *Building Western Australia's Workforce for Tomorrow* makes forecasts as to the impact economic development will have on the State predicting an additional 488,500 workers will be required over the next decade (to 2020). The CCI discussion paper calls for the development of a strategic plan that would consider how the State will respond to meeting the demands a growing population will place on infrastructure, housing, and support services such as energy, water, waste management, public transport, education, administration of government/public services and policing.

The WA Government through the formation of the new Department of Training and Workforce Development (October 2009) had already commenced the production of the State Workforce Development Plan and commissioned the ten Training Councils to produce Industry Workforce Development Plans for the sectors they represent. In effect the State had already commenced the production of the strategic plan that CCI had suggested.

Each of the Training Councils now has a service agreement with the new Department with a key deliverable to produce an Industry Workforce Development Plan which will inform the State Workforce Development Plan.

EUPA Training Council Industry Coverage

In September 2008, the Information Electrotechnology and Utilities (IEU) Industry Training Council was re-structured under new arrangements with the prior Department of Education and Training to become the Electrical, Utilities and Public Administration (EUPA) Training Council. At that time, the number of Industry Training Councils was reduced from fourteen to ten and this process involved reorganising industry coverage for each of the councils. As a result the following changes were made to industry coverage assigned to EUPA:

Table 1 – EUPA Training Council Industry Coverage

IEU	EUPA
Information Technology Electronics Telecommunications Printing Electrical Electricity Water Gas	Electrical and Telecommunications Electricity Supply - Generation, Transmission, Distribution and Rail Water Gas Waste Public Sector Public Safety Corrective Services Local Government

The result has required EUPA to establish new relationships in industry sectors that were not within the coverage of any of the previous Industry Training Councils. Having now established itself as a stakeholder in all of the industry sectors noted above, EUPA has identified the characteristics of each and found that synergies between the various sectors are difficult to recognise – particularly between the Electrical and Public Administration sectors. However it is evident that Utilities – and to some extent Local Government – does have common ground in relation to synergies with public safety sector and the employment of electrical and public sector workers.

E Electrical   U Utilities   PA Public Administration

EUPA
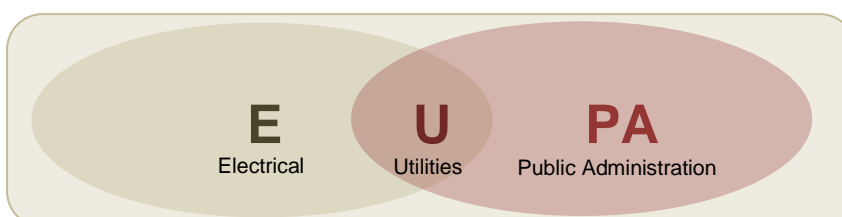
Major Issues

The CCI and other agencies have made forecasts as to the impact economic development will have on the State over the next decade. As a result of this development, the training and workforce development drivers impacting on the industry sectors EUPA represents include:

Table 2 – Major Economic Drivers

Driver	Relevance to the industries EUPA represents
Population Growth	**Increased demand for Domestic Housing** **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) **Increasing prison populations and demands on Corrective Services**
Resource Projects	**Competition for skilled labour** Including engineers, technicians, electricians, instrumentation, fixed and mobile plant operators, project managers, planners, human resources workers/managers, administrators, inspectors, OHS specialists **Environmental/Sustainability applications**

Demand for Energy	**Expansion of traditional electricity production utilising fossil fuels**
	
	Affecting: Electricity transmission and distribution,
	
	         Gas transmission and distribution
	
	         Alternate energy sources – Solar, Wind, Wave

Climate Change and Environment	Affecting: Water Sources and Treatment
	
	         Waste Management
	
	         Environmental Management
	
	         Public Safety

Technology Development	**Micro solar and wind electricity generation** (domestic installations) **National Broadband Network** **Electrical and electronic data and communication technologies** **Rapid changes and adoption of new technologies**

EUPA

If the CCI forecasts for population growth and labour demand prove to be correct then the States capacity to take advantage of the opportunities that currently present themselves will depend largely on *"industry's"* ability to address workforce development issues such as:

- **Population solutions:** recruiting from the existing state labour pool, migration from interstate and overseas
- **Participation solutions:** accessing under-utilised sectors and retaining existing staff
- **Productivity:** enhancing output through job/system redesign, employing technology, skills development and utilisation

Specific Regional Issues

In developing this Workforce Development Plan consultations were undertaken in all regional locations of the State. The following is a brief summary of the issues and opportunities identified in each location relevant to the industry sectors EUPA represents.

Table 3 – Regional Issues and Opportunities

Region	Issues and Opportunities
Kimberley	Major resources projects proposed – Gas Hub Labour demand will affect local Electrical, Utilities and Public Administration sectors. Current local training capacity in electrical industry sector is limited No significant training delivery in the other industry sectors EUPA represents including Public Administration and Gas Horizon Power establishing a training facility – Electricity Supply, with a focus on training Aboriginal people New prison proposed for the Derby region Demand for local governance and public services to grow Large population of Aboriginal people
Pilbara	Major resources projects – demand for engineering, management, electricians, instrumentation, hazardous area, and process/plant operators. Labour demand will affect local Electrical, Utilities and Public Administration sectors. Local training capability and capacity to be stretched Increasing requirement for post-trade training. No significant training delivery in the other industry sectors EUPA represents including Public Administration and Gas Population Growth – Regional Cities concept Demand for local governance and public services to grow Underground electricity distribution network proposed - skills in the region are currently limited.
Mid West	Major resource projects port expansion planned Labour demand will affect local Electrical, Utilities and Public Administration sectors. Predicted population growth – housing construction Local training effort in electrical industry sector is limited to training of apprentices No significant training delivery in the industry sectors EUPA represents

EUPA

EUPA	Demand for local governance and public services to grow
	Electricity transmission network to be constructed
	Geraldton identified as one of the first WA locations to become involved in the National Broadband Network
Central West	State Public Sector Agencies are the largest employer in the region
	No significant training delivery in any of the industry sectors EUPA represents
	Electricity transmission network to be constructed
	Likely to lose workers to the resources sector
Goldfields	No significant training delivery in the industry sectors EUPA represents
	Local training capacity in electrical industry sector is limited to training of apprentices
	Gold and Nickel mining sectors tend to attract skilled workers from other industry sectors
	Mature mining industry – however the region could lose workers to projects in the North West
	State Public Sector Agencies are a major employer in the region
Great Southern	State Public Sector Agencies are the largest employer in the region
	Electricity transmission network to be constructed
	Local training effort in electrical industry sector is limited to training of apprentices
	No significant training delivery in the industry sectors EUPA represents
South West	Continued population growth – housing construction
	Mature resources industry – could lose workers to projects in the North West
	Local training effort in electrical industry sector is limited to training of apprentices
	No significant training delivery in the other industry sectors EUPA represents
	State Public Sector Agencies are a major employer in the region
	Demand for local governance and public services to grow
	Electricity transmission network to be constructed
Peel	Continued population growth – housing construction
	Mandurah identified as one of the first WA locations to become involved in the National Broadband Network
	No significant training delivery in the industry sectors EUPA represents other than electrical
	State Public Sector Agencies are a major employer in the region
	Demand for local governance and public services to grow

EUPA

Critical Occupations

The critical occupations list contained within each industry review will further assist the Department of Training and Workforce Development to make informed judgements about investment in training at a state level. Critical occupations are those that meet any of the following criteria:

- Forecast strong demand
- Licensing / regulatory requirement
- Lag time for training
- Demographics
- New / emerging technology / occupations
- Difficult to fill (vacancy rates)
- Barriers to participation / entering occupations / retention
- Excessive hours of work
- Regional challenges
- Decline in training effort
- Competition between industries (i.e. same occupation)
- Other forces / events (e.g. 2011 Commonwealth Heads of Government Meeting)

In total there are 79 ANZSCO categories identified as critical occupations for the industries EUPA represents. Please refer to Attachment 1 for the list of occupations and justification for inclusion as defined by the Department's criteria above.

Alternatively, each industry overview lists the critical occupations relevant to that industry. Please note that some ANZSCO occupation codes relate to more than one industry sector.

State Priority Occupation List (SPOL)

The SPOL is produced annually and lists occupations that are in high demand or considered industry-critical in Western Australia. It will inform state workforce development planning, the skilled migration occupation list and the development of the State Training Plan, which will ultimately guide the funding of training services.

The following are criteria utilised for the ranking of occupations identified on the SPOL:

Top Priority occupations - Characterised by a combination of one or more of the following factors:

- very large levels of employment;
- high forecast growth and evident wage pressures;
- high levels of skill;
- longer education or training lead times;
- clear education and training pathways; and/or
- a clear and evident skills shortage.

High Priority occupations - characterised by:

- notable levels of employment;
- medium levels of skill;
- average training lead times;
- clear training pathways; and/or
- emerging evident skills or labour shortages or industry-related issues related to workforce development.

Priority occupations - characterised by:

- generally smaller employment sizes;
- low or negative employment growth;
- lower required levels of skill and training requirements; and/or
- evident non-training-related industry issues which are contributing to labour shortages.

EUPA Training Council has extended the information presented in the Critical Occupations (pages 10 to 15) within each industry summary to indicate whether the nominated occupations already appear on the current SPOL. Where the occupation does not appear on the current SPOL it is noted as 'Not on list'.
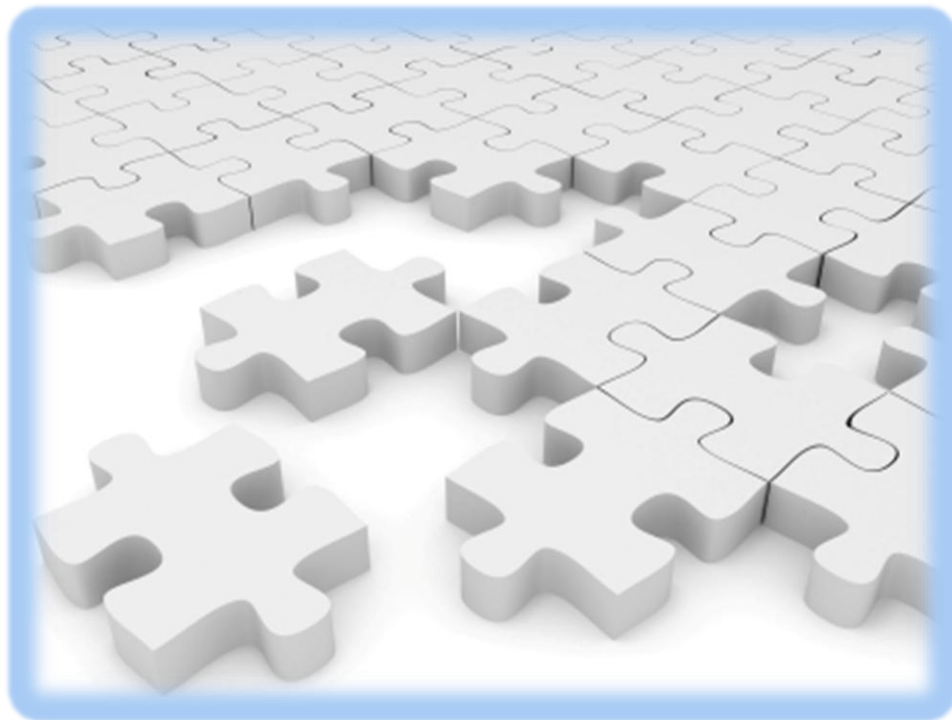
Current Apprenticeship and Traineeship Training Effort

The table below depicts training supply for the industry sectors EUPA represents where Apprenticeships/Traineeships are available.

Table 4 – Current Apprenticeship and Traineeship Training Effort

Sector	Core Occupational Coverage	Training Package	# RTOs (Contract Provider List)	RTOs (NTIS)	# Trainees/ Apprentices CURRENTLY IN TRAINING
Electrical	Electrician	UEE07 / UTE99,0 2	8	16	3,444
	Electronics and Comms		0	3	61
	Electro Communications		0	0	27
	General Communications		0	2	0
	Computer Systems		-	-	21
	Entertainment and Servicing		-	-	4
ESI TDR	Cable Jointer	UET06 / UET09	0	7	6
	Lineworker (Distribution)			10	138
	Lineworker (Transmission)			6	1
ESI Generation	Operators [1]	UEP06	0	13	15
Water	Water Operations	NWP07	2	2	136
	Paraprofessional Civil/Structural Engineering				23
Gas	Gas Operators	UEG06	0	3	66
Waste	Waste Operations/ Management	PRM04	0	1	Nil
Public Administration	Administration [2] Fraud Control Investigator	PSP04	0	13	110 through PSC (through BSB07) +14 others
Public Safety	Police Officer [3] Career Fire Fighter Investigator (DEC)	PUA00	0	35	350 Police 170 FESA 50
Corrective Services	Prison Officer [4]	CSC07	0	3	70
Local Government	Local Govt Administration Local Govt Planning	LGA04	2	7	3

[1] The National Training Information System (NTIS) lists 13 RTOs scoped to deliver from the UEP06 Training Package. These RTOs provide safety training outside the context of Electricity Generation. That is, the RTOs do not service the electricity generation industry.

[2] The NTIS lists 13 RTOs scoped to deliver from the PSP04 Training Package. However, there is a tendency for training providers to cater largely for the investigation/regulatory roles and very limited delivery through traineeship pathways.

[3] The NTIS lists 35 RTOs that are scoped to deliver from the PUA00 Training Package. Key stakeholders (WA Police, FESA and Department of Environment and Conservation) are enterprise RTOs that do not draw on the services of other RTOs to provide core-business training. The 32 private sector RTOs service a multi-industry market delivering workplace emergency response, emergency management/coordination, search and rescue, driving and fire qualifications/competencies. The private sector RTOs are not involved in traineeship delivery.

[4] Only private sector organisations continue to use traineeships as the state government agency is ineligible to receive State or Commonwealth funding.

Summary of Strategies

Table 6 below provides an overview of strategies identified by EUPA against each of the workforce development themes provided by the Department. The table below lists strategies that are common across all of EUPA's industry sectors only.

Table 5 – Overview of Strategies Identified

Theme	Strategy
Labour Market and Supply	- Enable, influence or explore skilled migration. - Analyse shifting labour market demand due to issues such as industry competition for labour, climate change, adoption of new technology and specific projects (e.g. the National Broadband Network). - Build relationships with all stakeholders, particularly: - In new industry sectors now within EUPA's scope; and - To facilitate regional development.
Workforce Participation	- Promote and assist to engage under-employed community sectors as appropriate to the industry sector. - Promote and assist sustainable regional employment.
Planning and Coordination	- Continue to build relationships with industry stakeholders. - Collaborate with peak bodies, central agencies and employer associations to assist planning and coordination. - Increase the capacity for industry to adopt workforce planning. - Consider the impact of green skills in the energy sectors.
Attraction and Retention	- Promote industry occupations to the community - Encourage and utilise vocational education and training to promote and enhance career opportunities, particularly in relation to: - Skills sets; and - Australian Apprenticeships. - Work with industry at enterprise and agency levels to assist attraction and retention strategies.
Training and Productivity	- Promote and assist access to publicly funded training places such as User Choice and PPP. - Promote and align skills sets to occupations - Increase the capacity of registered training providers to meet industry skilling needs. - Promote and encourage demand for training for industry, including establishment of a training culture in some industries. - Explore the establishment of a Utilities Centre of Excellence.

EUPA

PART 1 – ELECTRICAL INDUSTRY

EUPA
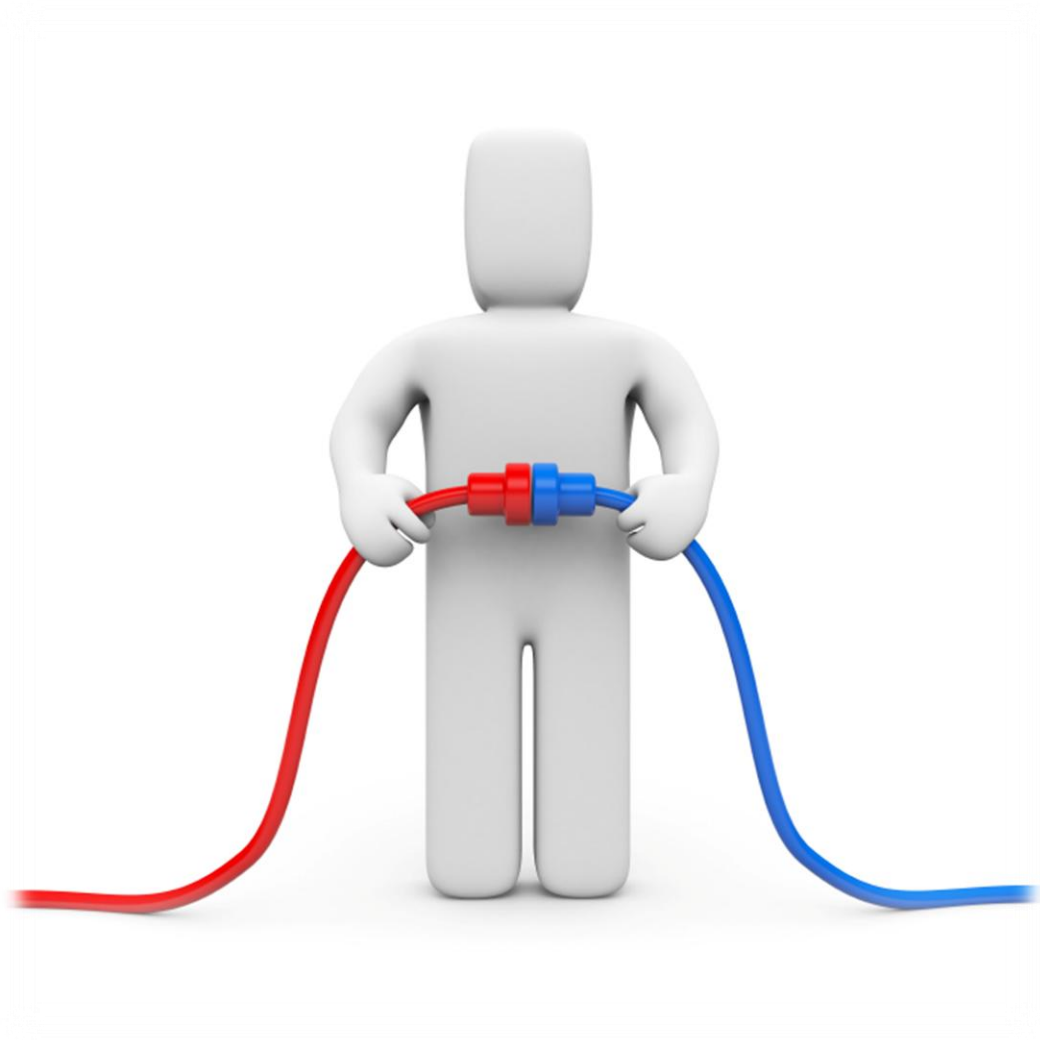
Electrical Industry - Strategic Environment

The Electrical and Telecommunications (Electrotechnology) industry 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.

There are approximately 25,000 electrical contracting companies across Australia and just over 4,000 of these operate in Western Australia. The sector is characterized by the large representation of micro-businesses however some medium to large contracting agencies do operate within the State. There are a significant number of individuals directly employed in other sectors such as construction, energy, mining and mineral processing that are considered to be part of the electrotechnology industry. The sector is highly technical in nature where the vast majority of employment occurs in occupations such as Electrical Engineers, Technicians and the Electrotechnology Trades.

While the education and training issues related to engineers sits within the tertiary sector those of para-professional technicians and trades fall within the VET sector. The vast majority of those employed in the sector are electricians.

While many electricians work in the building and construction sector the electrical trade includes specialist areas such as "instrumentation" and "hazardous areas" which are seen as necessary to gain employment in the resource sectors of mining, oil and gas exploration and mineral processing.

The electrical trade has strict regulatory requirements where every electrician practicing their trade must hold a valid Electrical Workers License. An electrician can only be licensed in Australia if they have completed an apprenticeship. Overseas trained people must undertake the approved recognition process through Trades Recognition Australia or VETASSESS.

The Electrical Licensing Board of WA has recorded a general increase in the issue of licenses over the last five years. (2005 – 2010)

The Office of Energy (July 2010) indicated that there are:

- 4,201 licensed electrical contractors currently registered in WA, of which it is estimated that less than half are currently active.

- 23,000 electricians licenses on issue in WA

- 1,166 electricians licensed to undertake "Fitting" only work in WA (Fitting means non-domestic or commercial installations or repair)

- 3,600 electrical training licenses on issue in WA

- 3,000 restricted electrical licenses issued of which 2,020 are issued to those that install Refrigeration and Air-conditioning equipment.

> **Over 5,000 WA electrician licenses are on issue to individuals who have a postal address other than WA**

However, ABS data (Labour Force Survey catalogue 6291.0) indicates that a total of 20,738 electricians were employed in Western Australia in the May quarter 2010. This would seem to indicate that some 3,500 WA Electrical Workers licenses are on issue to individuals not currently working within the trade in this State. Notwithstanding the above, over 5,000 Electrical Workers licenses are held by people resident outside of WA.

EUPA

Data from the ABS Labour Force Survey, May 2010 indicates that the number of electricians working in WA has almost doubled since the May quarter of 2000. That is an increase from 11,215 in 2000 to 20,738 electricians in 2010 practicing their trade over the past ten years. (a net increase of 9,523 electricians over the ten year period)

Despite the above, the trade of Electrician has been on the skills shortage list for 11 of the past 20 years and 8 of the past 10 years (from DEEWR's August 2009 review paper).

There has also been a threefold increase in the number of Electrical Engineers working in WA over the past ten years – form 965 in May 2000 to 2,810 in May 2010. Likewise the numbers of Electrical Draftspersons and Technicians have more doubled in the same period - 823 to 1,953 persons employed.

In addition to the above, those that install Refrigeration and Air-conditioning equipment must hold a license to handle fluorocarbon refrigerants. The Commonwealth Department of Environment and Heritage reports the number for people licensed to work with fluorocarbon refrigerants in WA is as follows:

- 2606, which includes 458 trainees with full Refrigeration and Air Conditioning endorsement

- 742 which includes 69 trainees with split system installation endorsement

Labour and Skill Needs

The National Electrical and Communications Association (NECA) in developing its National Skills Shortages Strategy (April 2009) concluded *"skills shortages are considerably higher in WA compared to the rest of the country".* This major work, based on national surveys conducted in 2007 and 2008 provides an insightful overview into the perceptions members of the association have about the skilling and workforce development needs of the industry. http://wa.neca.asn.au/

Electrotechnology tradespersons find employment in almost all industry sectors; however occupations in greatest demand at this point in time are as follows:

Electrician

The building and construction sector is a major employer of electricians in this State. The Construction Training Fund in its' December 2009 Industry Snapshot provides an optimistic though guarded overview of potential growth in this sector. Notwithstanding employment opportunities in the sector are positive, therefore demand for electricians is likely to remain high due to:

- Construction of new dwellings (First Home Owner Grant in the short term and Population Growth over the longer term)

- Home renovations

- Government infrastructure projects

- Building Better Schools project

THE Chamber of Commerce and Industry (CCI) in its discussion paper *"Building Western Australia's Workforce for Tomorrow" (June 2010)* forecasts that WA will need an additional 488,500 workers by 2020 and that there will be a shortfall of some 210,000 workers as the current rate of population growth is not sufficient to meet the predicted demand. Further the CCI paper predicts the Construction sector workforce will grow by some 104 percent, that is an additional 129,753 persons employed by 2020.

EUPA

If these forecasts are correct it could be assumed that the number of electricians working in WA will need to more than double between 2010 and 2020 from the 20,738 electricians in May 2010 to some 42,000 in 2020. As all electricians do not currently work in the construction sector, this estimate can only be seen as a useful guide to the magnitude of the demand for electricians across all industry sectors in the State.

Currently WA graduates approximately 1000 (in round figures) new electricians per year from the apprenticeship system, therefore if the above hypothesis is correct, this would mean - if the rate of apprentice training is not increased, WA would need to somehow source an additional 11,000 electricians over and above the 10,000 trained in WA between 2010 and 2020.

The supply and demand scenario for electricians is further confused as these estimates do not take into account those that will leave the trade due to retirement or to peruse other employment opportunity. Notwithstanding the figures noted above being an educated estimation, it is clear the demand for electricians will be significant and likely to be sustained for the foreseeable future.

Electricians with Hazardous areas expertise

There is a need in the resources sector (mining and exploration) for electricians with 'Hazardous Areas' training and expertise due to the exposure of workers to dust and combustible gases on these worksites. The oil and gas resources projects will require significant numbers of electricians with these additional skills.

Electricians with Instrumentation expertise and Instrumentation specialist

There is a shortage of qualified Instrumentation and Process Control workers in the resources sector. The Institute of Instrumentation, Control and Automation (IICA) have stated that there is a need for specialist Instrumentation Trade workers.

In addition the resources industry requires Electricians particularly those with Instrumentation skills. It should be noted that in many cases being an electrician is a pre-requisite qualification for employment in many process control job functions within the mineral processing sector and the electricity production and supply sector.

Air Conditioning and Refrigeration

The industry has identified a skill shortage in this trade and it was included on the August 2009 'Western Australia Occupations in Demand List'. The increase in the installation of Air Conditioning units in new buildings and replacement of ageing units in existing properties will only add to the skill shortage. Household installations have increased significantly where it is now estimated that 90 percent of new homes will be air-conditioned.

Electronics, Communications and Telecommunications

The Electronics Equipment Trades remain on the Department of Immigrations 'Critical Skills List'. Demand will increase as more electronic equipment and new communication technologies are introduced and this demand will increase further due to the Federal Government's proposed $42 Billion National Broadband Network.

While it is common practice for electricians to also have additional skills to undertake electronics, communications and telecommunications activities it is still unclear as to which occupational grouping will be engaged to undertake this significant amount of work. The NBN Company estimates that some 25,000 jobs per year for the next eight years (nationally) will be created by this project. That is some 200,000 jobs nationally and if WA maintains its "10 percent" proportion of all employment it would mean an additional 20,000 jobs in WA over the next ten years being created as a result of the Broadband Network.

EUPA

Table 4 - Occupations in demand by ANZSCO

ANZSCO	Occupation	State Priority Occupations List (Ranking)
341111	Electrician (General)	
341112	Electrician (Special Class)	
342111	Air Conditioning and Refrigeration Mechanic	
342313	Electronic Equipment Trades Worker	
342314	Electronic Instrument Trades Worker (General)	
342315	Electronic Instrument Trades Worker (Special Class)	
342414	Telecommunications Technician	

As noted above, demand for electricians is predicted to be significant and sustained for the foreseeable future and the current rate of training electrical apprentices will not satisfy the predicted demand. In addition, skill and labour shortages will be experienced from many industry sectors competing for electricians with the same skill sets, that is:

- Construction
- Engineering
- Energy Production
- Resources
- Minerals Processing

At the same time rapid advances in the adoption of new technologies by the community requires the existing workforce to engage in continued development of technical expertise to meet expectations.

Emerging occupations
- Green Electricians
- Design and installation of grid connected photovoltaic (solar) systems
- Wind energy systems
- Potential for dual trade apprenticeships – Electrician / Instrumentation
- Installation of smart metering systems
- Energy efficiency management and auditing
- Co-generation and local generation
- Domestic integrated energy management systems
- Commercial/industrial energy management systems integration

EUPA

Issues, Barriers and Opportunities

- A shortage of skilled labour to commence work on the construction of the broadband network

- Competition between industry sectors for electrical and electronic tradespersons will be significant

- Ongoing technological developments will need to be reflected in training and skills development for the workforce

- In 2012/13 there will be a lower number of apprentice electricians graduating from their training to become licensed electricians due to a low intake during the economic downturn of 2009

- Of the nineteen electrotechnology apprenticeships established across the nation only two are available in Western Australia.

- There will be a growing demand for post trade courses and qualifications to meet the evolving new technology and changing work requirements in each of the industry sectors previously noted. At present there are very few enrolments in higher level electrotechnology related qualifications at certificate IV and above.

- Community adoption and demand for technologies such as the installation of Photo Voltaic cells and smart grids will increase the demand for electricians with the capacity to undertake this form of work

- Limited access to training in regional areas and a perception that training in some regional centers is lacking in quality and breadth due to resourcing issues

- Work in building and construction work will increase with population growth

- The resources sector needs electricians with instrumentation and hazardous areas skills

- Electricians have been a long term skill shortage

- Apprentice numbers will need to increase to meet industry demand for tradespeople and to reduce the reliance on migrant workers

- As noted previously employment opportunities for those from the electrotechnology trades is predicted to grow significantly, therefore the States' capacity to train apprentices in sufficient numbers to meet the predicted demand for additional electricians will be severely tested.

- National licensing arrangements for electricians are likely to be introduced in 2011. It is not yet clear as to the processes that will apply for the attainment of the license or the renewal of an existing license.

- Industry and RTO representatives have continually raised the issue of would be apprentices not having the numeracy and literacy capabilities required to enter the industry.

- It has become the norm for employers to draw their new apprentices from those individuals who have completed an electrical pre-apprenticeship where the individual's capabilities are assessed prior to employment.

- One third of those that hold a WA Electrical Workers License currently do not work in trade.

- The Institute of Instrumentation, Control and Automation (IICA) have stated that there is a need for specialist Instrumentation Trade workers.
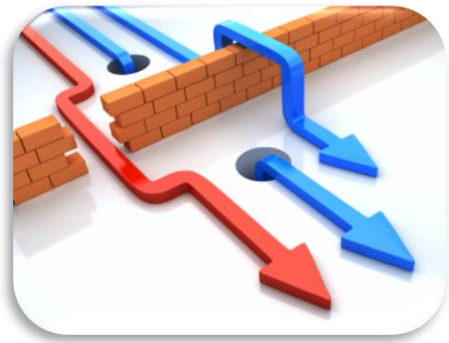
Training Issues

- Electricians complete a Certificate III (Trade Qualification) and possibly a Certificate IV (for example in instrumentation) however there is generally a low uptake of the Training Package higher level qualifications by industry.

- There is currently a shortage of trainers to service the training of apprentices in both public and private RTOs. This situation will become more acute as apprentice numbers increase.

- RTO's delivering the 'Electrical Trade Licensing' (ETL) courses are often at full capacity with long waiting times.

- There are very few RTOs equipped or resourced to deliver instrumentation training programs in Western Australia.
    1. The NECA National Skills Shortages Strategy (April 2009) report raises specific issues related to training. In particular it states:
    2. "There is a need for additional simulated learning methodologies which supplement practical arrangements;
    3. Industry considers much of the learning methodologies and content to be very dated; and

- Many employers have criticized the current Industry Training Package as too complex and not delivering what industry wants.

- WA industry does not use the qualifications contained in the current national Electrotechology Training Package (UEE07) to qualify those seeking to become Electrical Draftspersons and Technicians. Instead preferring to utilise State based accredited qualifications. It is local industry's view that the training package qualification structure is flawed in that the higher level qualifications contain pre-requisites that require an individual to have completed a Certificate III Electrotechnology - Systems Electrician qualification which is embedded in the para-professional technician Diploma and Advanced Diploma qualifications.

  This situation is further compounded by the State qualification classification structure which sees the UEE30807 Certificate III Electrotechnology - Systems Electrician classified "A", meaning it can only be completed through an apprenticeship pathway. This means only electricians can undertake certificate IV, Diploma and Advance Diploma qualifications from the training package.

  Industry in WA does not require all its technicians and draftspersons to be electricians.

EUPA

Training and Productivity

Action Plan/Priority Actions

Labour Market and Supply

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Influence the state skilled migration/skilled occupation list	6-12 months	Utilise environmental scan to reference against the Department of Training and Workforce Development (DTWD) State Priority Occupations List (SPOL). Qualifications in skills demand areas are being delivered by RTO's and funding is allocated from DTWD for delivery these qualifications	Electrical and Telecommunications
		1-3 years	Agencies influential in having the ability to rapidly increase the size of electrical sector skilled workforce are identified and consulted on a regular basis. Critical occupations reflected within the SPOL.	
		3-5 years	Monitor and advise DTWD of changes to skilled occupation requirements	
2	Undertake an assessment of which electrical occupations are likely to be impacted by competition from other industry sectors	6-12 months	Occupations identified and communicated to DTWD.	Electrical and Telecommunications
		1-3 years	Build upon established relationships with Industry and RTO's to evaluate the skills shortages and encourage the uptake of more apprentices/traineeships in the sector. Annual update provided to DTWD. Future editions of Workforce Development Plan (WDP) to make reference to the competition from other industries for electrical workers.	

EUPA

#		Timeframe	Outcome	Sector
3	Undertake an assessment of the workforce demand changes that are likely to result from adopting technologies related to climate change. Research the impact adoption of new technologies in will have on future labour demand and skilling needs of the workforce.	6-12 months	Funding sources identified for project. Attend forums and conferences on the related topics.	Electrical and Telecommunications
		1-3 years	Project completed and a report produced. The WDP is updated accordingly.	
		3-5 years	Future iterations of this Workforce Development Plan include information on the impact of the adoption of new technologies.	
4	Work with industry, particularly the NECA and CITF to formulate retention strategies aimed at offsetting the predicted impact of competition for labour from other industry sectors.		Ongoing consultations, activity of the Industry Working Group (IWG)	Electrical and Telecommunications
5	Engage the NBN Co to establish how the industry will be affected by the broadband rollout and inform DTWD of demands on employment and training.	0-12 months	Establish a taskforce in or working group to focus on the broadband roll out in WA. Occupations that will be undertaking the work in the constructing of the broadband network are identified and considered for inclusion for the SPOL list. Additional skills and qualifications for each occupation noted above are identified and publically funded opportunities are secured i.e. User Choice and PPP.	Electrical and Telecommunications
		1-3 years	RTO's delivering training to the NBN construction workforce. Funding allocated from Federal or State governments to assist in training for NBN construction. Establishment apprenticeships/traineeships to service this sector.	

EUPA

#				
6	Increase the number of training organisations State wide capable of delivering electrotechnology apprenticeship qualifications	Ongoing	Industry and RTO forums conducted (twice annually). Consultations and visits to RTO's with potential to deliver in this industry sector. Assist existing RTOs to meet AQTF Audit standards. Assist the Training Accreditation Council (and Auditors) with the technical requirements when dealing with RTOs with electrotechnology as part of their scope Seek to secure funding for the delivery of Skill Sets as a basis of post trade training	Electrical and Telecommunications
7	Build better relationships in regional areas to establish the skills and training needs of each area. Encourage RTO's to deliver more training regionally and be innovative in their approach to it.	6-12 months	EUPA facilitate meetings and assist in building partnerships between Perth based RTO's industry groups and regional organisations.	Electrical and Telecommunications
		1-3 years	Training becomes more accessible to regional people and more diverse traineeships/apprenticeships become available.	
		3-5 years	There is a significant increase in the uptake and completion of apprenticeships/traineeships regionally, producing more tradespeople in those areas.	
8	EUPA work closely with renewable energy organisation to establish the needs of the sector, informing RTO's and the IWG of any developments in the sector.	6-12 months	EUPA to engage organisations in the renewable energy sector and share data on workforce planning. EUPA to feed the information back to IWG and RTO group. EUPA to maintain membership of the Sustainability Energy Association and attend regular forums.	Electrical
		1-3 years	EUPA increases its consultations with renewable energy associations	
		3-5 years	EUPA produce a strategic plan for engagement in the renewable energy sector.	
9	An extra emphasis put on the recruitment of migrant electricians for 2012/13 due to the lower than average intake of apprentice electricians during the Global Financial Crisis in 2008/09.	6-12 months	EUPA to conduct research into demand for migrant workers (electrical) for this period. EUPA to advise DTWD on the migration policy for electricians for the period 2012/13.	

EUPA

Workforce Participation

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Increase awareness with employers of the benefits of providing employment opportunities to underrepresented groups (Aboriginal people, women, disabled)	6-12 months	Development and promotion of an industry awareness program about the range of education, training and employment initiatives available to support, train and recruit those from underrepresented groups	Electrical and Telecommunications
2	Promote the employment of underrepresented groups to industry. Identification of job roles that could make employment in the industry more attractive to women.	1-3 years	Initiatives established for the training and employment of underrepresented groups specifically targeting women and Aboriginal people. Increase the participation of women in non-traditional job roles such as electricians, technicians and draftspersons. EUPA to lobby the DTWD for the establishment an electrical pre-apprenticeship specific to Aboriginal People. EUPA to engage the Aboriginal Workforce Development Centre to establish suitable mentoring for the pre-apprenticeship scheme. Pre-apprenticeship specific to Aboriginal People established	Electrical and Telecommunications
3	Facilitate the establishment of partnerships between employers and training providers to develop innovative ways to ensure appropriate electrical training is available in the regions and remote communities.	3-5 years	EUPA facilitate meetings and assist in building partnerships between Perth based RTO's/industry groups and regional organisations	Electrical and Telecommunications
4	Raise awareness among careers advisors of the academic requirement (literacy and numeracy) for entry into electrical apprenticeships.	1-3 years	Produce an information brochure for distribution to high school career advisor network. Promote trade training to parents and citizen associations or similar. Brochure available through EUPA website. Increase in individuals undertaking EE-Oz online assessment.	Electrical and Telecommunications

EUPA

Planning and Coordination

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Research the potential demand for electricians with "green skills"	6-12 months	Identification of the number of "green" electricians required "Green skills" become part of the core skilling requirements in all electrical apprenticeships	Electrical and Telecommunications

2	Research into:
	 • Demographic trends to provide a framework to encourage electrical contractors adapt and plan for future skills requirements in the context of:
	  1. Loss of workers to the resources and energy sectors;
	  2. An ageing workforce and retirements in the next decade
	 • Workforce skills development to provide a framework to encourage electrical contractors to adapt and plan for future skills requirements, particularly related to new technology
	 • Workforce trends and emerging skills needs
		1-3 years	Project reports completed.
			 WDP updated with results and findings communicated to industry stakeholders.
			 Establishment of Certificate IV Electrotechnology Instrumentation apprenticeship
				Electrical and Telecommunications

3	Increase the Training Council profile in industry beyond that of NECA, so that relationships are also established with private electrical contracting organisations.	Ongoing	Lobby for the consolidation of responsibility for the Electrical industry to one Training Council. Increase numbers of electrical contractors taking up EUPA membership.	Electrical and Telecommunications

EUPA

Attraction and Retention

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Promote interest in electrical related occupations amongst school leavers Lobby for an increase in the level of pre-apprenticeship funding available through the DTWD to ensure an increase in the number of pre-apprenticeship graduates available for apprenticeships	6-12 months	Pathways from school to work in the electrical sector are promoted to those that provide career advice in schools. Numbers engaged in Electrical Pre-apprenticeships increase. Funding levels for the provision of electrical pre-apprenticeships is increased.	Electrical and Telecommunications
2	Work with "electrical enterprises" to develop attraction and retention strategies relevant to their workforce needs, such as: • Offering flexible employment arrangements • Creating a family friendly workplace • Provision of a reward and recognition program • Permanent employment rather than part-time or contract positions • Succession planning Phasing employees from work to retirement	1-3 years	Examples of possible attraction and retention strategies are developed and promoted to industry. The number of electrical enterprises seeking assistance	Electrical and Telecommunications
3	Work with electrical contractors to identify training opportunities for employees as a potential retention strategy	3-5 years	The number of electrical enterprises seeking assistance	Electrical and Telecommunications

EUPA

Training and Productivity

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Promote the establishment of a Utilities 'Centre of Excellence' for the Gas, Water, Waste, Electricity Supply and Telecommunications Industries.	6-12 months	Conduct a feasibility study for the Centre of Excellence.	Electrical and Telecommunications
		1-3 years	A submission produced for presentation with a model for the Centre.	
		3-5 years	Training commences in the Utilities Centre of Excellence with the possible inclusion of an assessment centre to assess migrant workers, Capstone and other end of Apprenticeship/Traineeship assessments for the industry.	
2	EUPA encourage DTWD to adopt an accommodation system for regional Apprentices/Trainees similar to that model used for overseas students in tertiary education.	6-12 months	Research is carried out and the suitable model is found.	Electrical and Telecommunications
		1-3 years	The accommodation system is implemented and monitored to ensure it is meeting the needs of the students. The attrition rates for regional people in training are reduced and the system undergoes continuous improvement.	
		3-5 years	The accommodation system expands and is seen as an important support function within the training sector and a benefit for the community.	
3	Assist electrical contractors access training places and improve the demand for uptake of training under the various forms of public funding including User Choice and Productivity Places Program	6-12 months	Qualifications, pathways and skill sets relevant to the electrical industry are identified. Funding is accessed	Electrical and Telecommunications
4	Seek to influence funding agencies to provide for industry targeted training opportunities for particular	1-3 years	Future PPP funding is available for skill sets.	Electrical and Telecommunications

EUPA

	skills sets as distinct from training for qualifications			
5	Encourage the national ISC review the qualifications structure of the Training Package and remove unnecessary pre-requisites from higher level para-professional qualifications. Encourage the integration of new and emerging technologies, environmental management and sustainability issues and practices into existing training packages.	Ongoing	Attendance at ISC forums and facilitate industry attendance to ISC workshops. Communicate outcomes to industry stakeholders State wide.	Electrical and Telecommunications
6	Develop a guide with examples of best practice within electrical contractors identifying where training contributes to increased productivity, reduced costs to the business and improved worker engagement	1-3 years	Guide is produced and available on EUPA website.	Electrical and Telecommunications
7	Seek to increase the capacity and capability of Registered Training Organisations (RTOs) to be in a better position to service the industry skilling needs in both the metropolitan and regional areas.	1-3 years	Continue to identify occupations on SPOL for trade trainers. RTOs to utilize industry technical experts to support training delivery Research the mechanisms of a register for individuals interested to deliver trade training. Report findings to IWG for action Program to support attraction of tradespeople into career as Instructors/Teachers. Identification of capital funding opportunities to assist the establishment and growth of Private and not for profit RTOs	Electrical and Telecommunications
8	Assist Electrical Group Training (EGT) in identifying a potential pilot program for an advanced apprenticeship (dual trade) for candidates with exceptional skills/ability.	6-12 months	Consultation with EGT and wider industry, including the regulator and ISC for the development of "advanced apprenticeship". Commence a pilot program	

EUPA

PART 2 – UTILITIES

EUPA

Powerlines in the sunset (Owner OzinOH Sourced Flickr 16/9/2010)

Industry Overview

The Department of Education, Employment and Workplace Relations (DEEWR) in its Employment outlook for Electricity, Gas Water and Waste Services reports the Utilities sector to be the smallest employing industry in Australia retaining some 144, 300 people (or 1.3 per cent of the total workforce nationally) as at February 2009. While DEEWR also reports that some 20,100 people were employed in this industry sector in Western Australia

http://www.skillsinfo.gov.au/skills/Industries/Electricitygaswaterandwasteservices/

The DEEWR employment outlook claims there is a constant demand for these utility services however it stresses employment is affected by the economic cycle, demand and supply factors within the domestic economy, industry policies and longer term trends in the energy industry especially the deregulation of energy markets. Employment growth is predicted to be better than the national average and in the coming years to 2013-14, employment is expected to increase at an average rate of 1.1 per cent per annum, which equates to an increase of around 7900 jobs nationally. This compares with an average annual growth rate of 1.0 per cent across all industries over the same period.

In the five years to February 2009, the largest job gains were in Water Supply, Sewerage and Drainage Services (up by 20,100).

DEEWR is predicting employment growth in the five years to 2013-14, across five of the eight sectors. Electricity Distribution is expected to be the main driver behind growth (up by 2200) followed by Water Supply, Sewerage and Drainage Services (1700) and Water Collection Services (1500).

The Utilities industry has an older than average workforce relative to all industries where 45% of the industry's workforce were aged 45 years and over in 2008 compared with 37.4% for all industries.

The bulk of the mature age workforce in the industry, at the time of the DEEWR report, were aged 45 to 54 years (27.5 per cent) while 2.2 per cent of workers were aged 65 years and over.

In the ten years to 2008, all age groups within the Utilities industry experienced employment growth. Workers aged 45-54 years experienced the strongest employment growth (up by 13,800 or 69.0% nationally).

The industry workforce consists predominantly of male full-time workers (74.6 per cent of industry employment). In comparison, female employment, both full-time (16.8%) and part-time (4.7%), was below the average for all industries. In the year to February 2009, Electricity Generation employed the highest proportion of males (94.8 %)

The industry has a high educational profile however it does provide job opportunities for low skilled workers. In May 2008, 71.8% of workers in the industry had completed a non-school qualification, compared with 60.2% for all industries. Over one fifth (21.0%) of workers hold a Bachelor degree or above, while an even larger proportion (32.1 %) held a Certificate III or IV qualification, attributable to those with Trades qualifications. However, 28.3% of workers in the industry were without a non-school qualification.

DEEWR reports the median weekly earnings of full-time Utilities industry employees in August 2008 were $1200, higher than for all industries ($1000). Workers in the Electricity Generation sector earned the most ($1750), followed by Electricity Distribution workers ($1500). The higher than average earnings for workers in the industry is considered to because of the higher skills needed for the majority of occupations in the industry, particularly Trades and Engineering Professionals.

EUPA

Occupations in industry are spread across the Professions and Trades, in addition to a variety of administrative positions. The largest employing occupations nationally were:

- Truck Drivers (10 300), followed by

- Electricians (7000) and

- Electrical Distribution Trades Workers (5000).

Table 7 – National Industry classification compared to WA Utilities classification

Nationally the Electricity, Gas Water and Waste Services industry is divided into eight sub – sectors:	In WA the Utilities industry is divided into four sub-sectors
1. Electricity Generation 2. Electricity Transmission 3. Electricity Distribution 4. On Selling Electricity and Electricity Market Operation 5. Gas Supply 6. Water Supply Sewerage and Drainage Services 7. Waste Collection Services 8. Waste Treatment, Disposal and Remediation	1. Electricity Supply • Generation • Transmission, Distribution and Rail 2. Gas 3. Water 4. Waste

Electricity Supply (Generation) Strategic Environment

The Office of Energy in development of the Strategic Energy Initiative (SEI) is in the process of producing 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 to be completed by the end of 2010 will propose an energy vision for 2030 to deliver certainly to investors, and to enhance future competitiveness and productivity.

The SEI will have four strategic goals:

1   Secure energy

2   Reliable energy

3   Competitive energy; and

4   Cleaner energy

The Strategic Energy Initiative 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.

Future Workforce Development issues will be explored within the context of the SEI.

Installed Electricity Generation Capacity

The electricity generation sector has both public and private owed power stations that utilise fossil fuels of coal and gas or renewable sources of power such as wind, solar, hydroelectric and biomass combustion to produce the State's electricity needs. The larger power stations with the highest output of electricity are fuelled by coal and gas with the renewable energy power stations being much smaller producers of electricity. 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

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. There are a growing number of new businesses and homes connecting to the grid and the average amount of power used per home has increased. Western Power's forecasts in WA suggest this level of growth is set to continue.

As at August 2008, Western Australia had:

- 6951MW of installed capacity of which 3.75% is from renewable sources. This includes 240MW of capacity that was due to be retired by the end of 2008; and

- 1107MW of additional capacity that was committed or under construction and due to commence operation in either 2008 or 2009 of which 41MW is from renewable sources.

There is approximately 2194MW of coal generation plant, 2694MW of natural gas generation plant and 83MW of distillate fired plant. 640MW of plant can operate on either coal or gas although its capacity is only 460MW when coal-fired. 1189MW of plant can operate on either gas or distillate although 240MW of that is due to retire by the end of 2008.

Data from the Office of Energy's website shows that there are some eighty-five (85) electricity generation stations that utilise non-renewable fuel sources such as coal, gas or distillate of various capacities throughout the state. These are operated by energy supply organisations, mine sites and processing plant.

In addition to which there are twenty-nine (29) electricity generation stations that utilise renewable fuel sources such as wind, biomass, hydro and landfill gas. (Reference: Office of Energy Website www.energy.wa.gov.au)

Significant new generation plant (fossil and renewable) have been approved for construction or planned for construction (*Source Chamber of Minerals and Energy)*

Labour and Skill Needs

The electricity generation sector is primarily one of manufacturing and process control, where the generation plant produces electricity and the plant operations are controlled through some form of computerised and communication technology systems where the operator need not necessarily interface with the technical functions of the plant. People working in the sector may be involved in a wide range of tasks, including:

- Operation of the plant from a control room (possibly remote to the site)
- Local operation of plant systems
- Management and coordination of unit or station operations
- Mechanical maintenance
- Electrical maintenance
- Electronic/Instrumentation maintenance
- Installation of new plant.

The sector has experienced a sustained period of restructuring of the State owned Energy Corporation (Western Power to Verve Energy and Horizon Energy. As a consequence of this restructuring, employment in the sector has been reduced and this shift has seen the skills of tradespersons from other industry sectors being contracted to meet construction and maintenance requirements.

The industry maintains a strong commitment to training and safety, although there has been very little take up of National Training Arrangements by the sector in WA.

Generation encompasses all activities from the point of supply/acceptance of energy resources and consumables to the point of exit of electrical energy and by-products of the generation processes. It includes all operations, maintenance, systems support, scientific, engineering and design support, management, marketing and administration functions required to establish and meet business objectives.

The sector is subject to a high level of legislation, regulation, codes of practice, guidelines and advisory standards. These regulatory requirements are typically based on the principle of public safety and the safety and health of individuals who work on electricity generation plant, equipment and systems.

There are three specific areas that provide individuals with the opportunity for employment in the Generation sector:

EUPA

Operations

Operations is a generic term given to employees who undertake a wide range of functions within the electricity generation power station. Those who work in Operations ensure the electricity generation plant is functioning to optimum capacity. Individuals may be specific plant operators or multipurpose operators. Operators also undertake some maintenance functions within the power station.

System Operations

System Operations refers to those occupations that control the production of electricity to meet consumer demand. They require the individual to have an excellent understanding of the operations and technical capabilities of the generation plant.

Maintenance

Entry to a maintenance career path within the Generation Sector will require the individual to have completed a recognised trade qualification through the Electrotechnology or Metals and Engineering Training Packages or equivalent before embarking on further training in the maintenance requirements of electricity generation plant and equipment.

Industry commentators have identified the following occupations as those likely to be in greatest demand by the sector due to influences such as expanding electricity generation capacity, adoption of new technologies, competition between industry sectors and aging of the current workforce:

Table 8 – Electricity Generation Occupations in Demand by ANZSCO

ANZSCO	Occupation	State Priority Occupations List (Ranking)
2333	Electrical Engineers	TOP
2335	Industrial, Mechanical Engineers	NOT LISTED
3123	Electrical Engineering Draftspersons and Technicians	TOP
3411	Electricians	TOP
3999	Instrumentation Technicians	PRIORITY
3232	Mechanical Fitters	TOP
3992	Plant Operators	PRIORITY

Potential future skills needs include:

- Renewable energy
- Planning and design
- Business leadership and entrepreneurship
- Project management and procurement including
  - Assessment of project requirements; specification of inputs, system specifications and outcomes such as energy use, efficiency, market value.
- Energy Markets

Issues, Barriers and Opportunities

EUPA consulted widely and undertook extensive desktop research to identify labour and skilling issues, barriers to employment and training as well as potential opportunities related to the above. The following is a summary of the known workforce development issues relevant to the Electricity Generation industry sector in Western Australia:

- Population growth
- Regional demand for energy
- Government policy – Climate change
- New technologies in clean energy production
- Aging workforce
- Industry requires highly skilled operatives
- Competition with other industry sectors for labour with similar skill sets
- Expanding electricity generation capacity

In addition to the above, predicted areas of future skill shortages include new emerging systems/technologies to increase energy efficiency and reduce carbon emissions. This restructuring of the energy system will require occupations and skills not yet available.

Demand is expected to increase for skills in the design and construction of energy efficient buildings and infrastructure, as well as the installation and maintenance of efficient appliances and machinery. Skill needs will include technical and trade skills, design and engineering, assessment and accreditation, reliable product and market knowledge, and supply and post-sale support.

It is predicted that there will not be enough skilled labour to meet the demand of the future energy production projects without taking into account workforce retirements, attrition rates of trainees/apprentices and the prospect of migrant workers returning to their country of origin.

Electricity generation enterprises generally employ already qualified tradesmen (Electricians and Mechanical Fitters) as operators of the plant.

The generation Industry is generally using product supplier training and in house procedural and authorisation training as the means to develop its workforce.

The generation training package needs to be updated to reflect the new technologies (the new forms of renewable generation)

There are no publicly funded training providers operating the generation sector.

There is low uptake of the generation training package in WA with only three enterprise RTOs identified with scope to deliver full qualifications.

Of particular concern is the number of RTOs (26 local and 7 interstate) with a scope of registration to deliver specific units of competence from the Generation Training Package for the purposes of being able to issue "WorkSafe" operator tickets. It is a well accepted practice for these RTOs to gain registration through the Training Accreditation Council processes with no intention of assessing to a unit of competence outcome or for that matter conducting assessment within the context of the Generation industry. These RTO give the impression that the sector is well serviced by the training sector where in fact there is very little nationally recognised training delivered.

Electricity Supply (Transmission and Distribution) Strategic Environment

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

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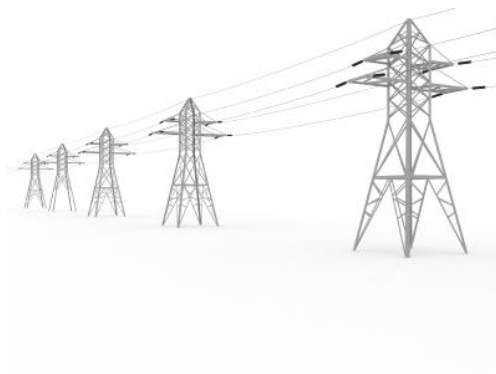
In recent years, the sector has been significantly affected by:

- 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

- The consumer competition policy

- Increasing government and consumer demand for a response to global warming

Western Power and Horizon Power operate and maintain the large transmission and distribution networks which connect to the majority of the consumers and both organisations are owned by the State Government. 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.

The Office of Energy provides advice to the Government on policy aspects and legislation relevant to Western Australia's electricity 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 operated by Western Power and Horizon Power.

The recently completed electricity industry reform process has resulted in:

- the creation of the new Western Power as a standalone networks business to provide a greater focus on networks investment and service standards in the South West Interconnected System, and Horizon Power dedicated solely to the needs of rural electricity customers;

- the implementation of new regulatory measures applying to interconnected networks, including an Electricity Networks Access Code, and a Reliability and Quality of Supply Code; and

- the establishment of a new Customer Protection framework, including an Energy Ombudsman, and a Code of Conduct for supplying small use customers, aimed at delivering better customer service to residential and small business electricity users.

Electricity Transmission and Distribution projects in Western Australia

It has recently been announced that Western Power is to commence some $4.8 billion worth of project work in the latter part of 2010 which will cover Transmission and Distribution projects until 30 June 2012. Extra funding has also been committed by the State Government (Royalties for Regions) to upgrade some power Networks in the regional areas.

Horizon Power will also continue its upgrade and expansion program, on the electricity network in the State's regional areas.

Some very significant projects have been commenced or are about to be undertaken by the Network Operating companies. Details of these projects are available through the Western Power, Horizon Power and the Office of Energy web sites.

Organisations such as Downer EDI, Thiess Services, Transfield Services, West Coast Energy and other contracting organisations will likely tender to complete some of these works and these contractor organisations expect to experience difficulties in recruiting suitable skilled labour as follows.

National Broadband Network (NBN)

Recent discussions with the NBN Company have indicated that it likely that the fibre-optic cable will be attached to the distribution assets (Poles) in close proximity to the live low voltage conductors. This raises many issues regarding access to the infrastructure and which occupations might undertake the installation work. Current indications are that lineworkers would need to gain additional skills to undertake this work.

Labour and Skill Needs

Table 9 – Electricity Transmission & Distribution Occupations in Demand by ANZSCO

ANZSCO	Occupation	State Priority Occupations List (Ranking)
342211	Transmission Lineworkers	TOP
342211	Distribution Lineworkers (including HV Live Line workers)	TOP
342212	Cable Jointing (new work & asset improvement, in particular underground cable-jointing. Also specialist cable-jointers, eg; paper/lead)	TOP

A particular area of concern to the industry is the significant shortages in 'Live Line Glove and Barrier' qualified workers and at this time (June 2010) there is increasing number of vacancies for this type of lineworker within the industry in WA.

EUPA

Other Occupations with Labour and Skill Shortages

- Lineworkers with telecommunications competencies
- Vegetation Control workers
- Electrician (especially with HV switching exp)
- Instrumentation & Control Technicians
- Technical Officers / Engineering Technicians/officers
- Riggers & Scaffolders
- Welders
- Distribution Designers (design, drafting & construction of new assets and intelligent systems)
- Meter Technicians (next 5 years as 'SMART' metering is introduced, with peak in next 2-3 years)
- Protection & Control Technicians
- Test & Commissioning Technicians
- Substation Technicians
- Project Managers (especially Construction PMs)
- System Operations (incl. Senior plant leaders, controllers)
- Network Operations
- Compliance Officers
- Electrical/Power Engineering (incl. embedded generation, testing/protection & commissioning, design/planning/ analysis)
- Inspections/Safety Electrical Inspectors
- Safety Managers
- Training Workplace mentors, trainers and assessors (on-job) and Industry specialist technical trainers (off-job)
- Management - Managers with trade backgrounds

EUPA

Issues, Barriers and Opportunities

The following is a summary of the known workforce development issues relevant to the Electricity Supply – Transmission and Distribution industry sector in Western Australia:

- Population growth – ever expanding network

- Regional demand for energy

- Aging distribution network (Pole replacements and other maintenance)

- Government policy – Climate change

- Aging workforce

- Industry requires highly skilled operatives

- Competition with other industry sectors for labour with similar skill sets

- International competition for skilled labour in this industry sector is significant as is competition between the states.

- Too few training providers servicing the industry.

A recent National Industry Skills Council project has confirmed that the severity of skills shortages in the industry are such that the current apprentice / trainee numbers will not cover the aged retirements expected in the next few years.

There is only one training provider currently servicing the industry to qualify Distribution Lineworkers and Cable Jointers in the State (Western Power – Power Training Services).

There are no Transmission Lineworker trainees registered as in training in Western Australia

There is little delivery of higher level qualifications (Certificate IV and above) in electricity supply in Western Australia

A major bottleneck in the training of lineworkers exists in that Power Training Services has limited extra capacity to train non Western Power employees. This means those contractor organisations retained through the Western Power preferred contractor arrangements have limited capacity to employ locally or to train West Australians seeking to become lineworkers or cable jointers.

There has been longstanding industry disquiet with the current arrangements, whereby Western Power being the infrastructure owner and the contract manager, therefore having the ability to require contractor employees hold specific qualifications to access the infrastructure while at the same time being the only training provider in WA capable of delivering those qualifications.

The lack of training providers is limiting transmission and distribution lineworkers ability to access network authorisation courses to allow them work on the WA electricity supply networks. Currently only Western Power – PTS delivers these authorisation courses and the training facility is continuously near full capacity. This also results in PTS not having the capacity to expand its delivery of lineworker and cable jointer traineeship training to accommodate other employer organisations needs.

The Transmission Lineworkers Certificate III is not currently being delivered by an RTO registered in WA. There is likely to be demand for this form of training as major electricity transmission projects commence in the latter part of 2010.

EUPA

There are only six Cable Jointer trainees in the State and these numbers are unlikely to meet the future demands of the industry as there is a move to have the electricity network located underground, especially in the cyclone areas (see the Pilbara underground project) and new metropolitan suburbs.

The transmission and distribution lineworkers are a global skill shortage. Migration may not be an option to address these skill shortages.

The Certificate III in Rail Traction is not currently delivered in WA and any training in this area is undertaken in house and not under national training package arrangements.

Should the broadband rollout require Lineworker and Cable Jointer skills it will mean increased demand for workers that are already a global skill shortage.

Training and Productivity

Action Plan/Priority Actions

Labour Market and Supply

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Influence the state skilled migration/skilled occupation list	6-12 months	Utilise environmental scan to reference against the Department of Training and Workforce Development (DTWD) State Priority Occupations List (SPOL). Qualifications in skills demand areas are being delivered by RTO's and funding is allocated from DTWD for delivery these qualifications	Generation Transmission-Distribution and Rail
		1-3 years	Agencies influential in having the ability to rapidly increase the size of Electricity Supply Industry (ESI) skilled workforce are identified and consulted on a regular basis. Critical occupations reflected within the State SPOL.	
		3-5 years	Monitor and advise DTWD of changes to skilled occupation requirements	
2	Work with the regulator on the introduction of proposed national licensing for Lineworkers/Cable Jointers, including processes for migrants to attain the licensed outcome.	1-3 years	Explore the requirement of skills assessment for all migrants to attain the licensed outcome. IWG produce policy on introduction of licensing arrangements. EUPA advice provided to regulator on industry position with respect to licensing requirements.	Transmission-Distribution and Rail
3	Undertake an assessment of which ESI occupations are likely to be impacted by competition from other industry sectors	6-12 months	Occupations identified and communicated to DTWD.	Generation Transmission-Distribution and Rail
		1-3 years	Build upon established relationships with Industry and RTO's to evaluate the skills shortages and encourage the uptake of more apprentices/traineeships in the sector.	

EUPA

#		Timeframe	Outcome	Sector
4			Annual update provided to DTWD.	
			Future editions of Workforce Development Plan (WDP) to make reference to the competition from other industries for ESI workers.	
	Undertake an assessment of the workforce demand changes that are likely to result from adopting technologies related to climate change. Research the impact adoption of new technologies in will have on future labour demand and skilling needs of the workforce.	6-12 months	Funding sources identified for project. Attend forums and conferences on the related topics.	Generation Transmission-Distribution and Rail
		1-3 years	Project completed and a report produced. The WDP is updated accordingly.	
		3-5 years	Future iterations of this Workforce Development Plan include information on the impact of the adoption of new technologies.	
5	Broaden EUPA's Industry contacts and work with stakeholders to develop a short term strategy designed and implemented to address the current skills crisis.	6-12 months	Establishment of the IWG with regular meetings. Traineeships in Distribution trades changed to apprenticeships established to service the sector. More RTO's delivering Certificate III in Transmission and Distribution trades (not network owners).	Transmission-Distribution and Rail
		1-3 years	A long term strategy is developed for training in the industry to meet skills needs. There is a significant increase in the recruitment of apprentices/trainees in the sector. Transmission Lineworker apprenticeship delivered in WA.	
		3-5 years	The long term strategy is adopted by the industry.	

#		Timeframe	Action	Sector
6	Engage the NBN Co to establish how the industry will be affected by the broadband rollout and inform DTWD of demands on employment and training.	0-12 months	Establish a taskforce in or working group to focus on the broadband roll out in WA. Occupations that will be undertaking the work in the constructing of the broadband network are identified and considered for inclusion for the SPOL list. Additional skills and qualifications for each occupation noted above are identified and publically funded opportunities are secured i.e. User Choice and PPP.	Transmission-Distribution
		1-3 years	RTO's delivering training to the NBN construction workforce. Funding allocated from Federal or State governments to assist in training for NBN construction if it determined that Lineworkers/cable jointers will be occupations required in the broadband network construction.	
7	Increase the number of training organisations State wide capable of delivering ESI apprenticeship/traineeship qualifications	Ongoing	Industry and RTO forums conducted (twice annually). Consultations and visits to RTO's with potential to deliver in this industry sector.	Generation Transmission-Distribution and Rail
8	Build better relationships in regional areas to establish the skills and training needs of each area. Encourage RTO's to deliver more training regionally and be innovative in their approach to it.	6-12 months	EUPA representatives attending regional group meetings or contributing without being in attendance.	Generation Transmission-Distribution and Rail
		1-3 years	Training becomes more accessible to regional people and more diverse traineeships/apprenticeships become available.	
		3-5 years	There is a significant increase in the uptake and completion of apprenticeships/traineeships regionally, producing more tradespeople in those areas.	

EUPA

Workforce Participation

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Increase awareness with employers of the benefits of providing employment opportunities to underrepresented groups (Aboriginal People, women, disabled)	6-12 months	Development and promotion of an industry awareness program about the range of education, training and employment initiatives available to support, train and recruit those from underrepresented groups	Generation Transmission-Distribution and Rail
2	Promote the employment of underrepresented groups to industry Identification of job roles that could make employment in the industry more attractive to women	1-3 years	Initiatives established for the training and employment of underrepresented groups specifically targeting women and Aboriginal people. Increase the participation of women in non-traditional job roles such as electricians, technicians and draftspersons	Generation Transmission-Distribution and Rail
3	Facilitate the establishment of partnerships between employers and training providers to develop innovative ways to ensure appropriate electrical training is available in the regions and remote communities	3-5 years	Partnerships established Aboriginal people engaged in electrical training opportunities	Generation Transmission-Distribution and Rail
4	Raise awareness among careers advisors of the academic requirement (literacy and numeracy) for entry into ESI apprenticeships/traineeships.	1-3 years	Produce an information brochure for distribution to high school career advisor network. Brochure available through EUPA website. Increase in individuals undertaking EE-Oz online assessment.	Generation Transmission-Distribution and Rail

EUPA

Planning and Coordination

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Create new and build on existing relationships within the Generation sector.	6-12 months	Undertake an extensive research project to establish fully the labour needs of the Generation sector, encompassing the entire generating capacity of the State and the Chamber of Minerals and Energy. Determine labour market and supply issues/concerns that impact upon the sector.	Generation
		1-3 years	A long term training strategy is designed and implemented to service the Generation companies. Awareness in Generation industry of the opportunities that exist through national training package arrangements to qualify operators.	
2	EUPA to submit an application to convert the Lineworker and cable jointer traineeships to apprenticeship to meet the requirements of national licensing to be introduced.	0-6 months	Application produced and submitted.	
		6-12 months	Apprenticeships are recognised.	
3	Research into demographic trends to provide a framework to encourage ESI companies adapt and plan for future skills requirements in the context of: 1. Loss of workers to the resources and energy sectors; 2. An ageing workforce and retirements in the next decade Research workforce skills development to provide a framework to encourage ESI companies to adapt and plan for future skills requirements, particularly related to new technology	1-3 years	Project reports completed. WDP updated with results and findings communicated to industry stakeholders.	

EUPA

4	EUPA work closely with renewable energy organisation to establish the needs of the sector, informing RTO's and the IWG of any developments in the sector.	6-12 months	EUPA to engage organisations in the renewable energy sector and share data on workforce planning. EUPA to feed the information back to IWG and RTO group.
			EUPA to maintain membership of the Sustainability Energy Association and attend regular forums.
		1-3 years	EUPA increases its consultations with renewable energy associations
		3-5 years	EUPA produce a strategic plan for engagement in the renewable energy sector.

Attraction and Retention

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Promote interest in ESI related occupations amongst school leavers	6-12 months	Pathways from school to work in the ESI sector are promoted to those that provide career advice in schools.	Generation Transmission-Distribution and Rail
2	Work with "ESI enterprises" to develop attraction and retention strategies relevant to their workforce needs, such as: • Offering flexible employment arrangements • Creating a family friendly workplace • Provision of a reward and recognition program • Creating job pathways from operating positions to training mentors for older/experienced workers • Permanent employment rather than part-time or contract positions • Succession planning Phasing employees from work to retirement • Addressing the issue of a transient workforce	1-3 years	Examples of possible attraction and retention strategies are developed and promoted to industry. The number of ESI enterprises seeking assistance	Generation Transmission-Distribution and Rail
3	Encourage the training of skills set and post trade qualification in the industry to up skill the workforce (skill sets could include those required to support NBN rollout).	0-6 months	Identification of appropriate skill sets and qualifications. Funding for these skill sets and qualifications is identified. Communication with RTO's and Industry.	Transmission-Distribution
		1-3 years	The industry is participating in more post trade training.	

EUPA

Training and Productivity

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Promote the establishment of a Utilities 'Centre of Excellence' for the Gas, Water, Waste, Electricity Supply and Telecommunications Industries.	6-12 months	Conduct a feasibility study for the Centre of Excellence.	Generation Transmission-Distribution and Rail
		1-3 years	A submission produced for presentation with a model for the Centre.	
		3-5 years	Training commences in the Utilities Centre of Excellence with the possible inclusion of an assessment centre for assessing migrant workers and other end of Apprenticeship/Traineeship assessments the industry.	
2	EUPA encourage DTWD to adopt an accommodation system for regional Apprentices/Trainees similar to that model used for overseas students in tertiary education.	6-12 months	Research is carried out and the suitable model is found.	Generation Transmission-Distribution and Rail
		1-3 years	The accommodation system is implemented and monitored to ensure it is meeting the needs of the students. The attrition rates for regional people in training are reduced and the system undergoes continuous improvement.	
		3-5 years	The accommodation system expands and is seen as an important support function within the training sector and a benefit for the community.	
3	Assist ESI contractors access training places and improve the demand for uptake of training under the various forms of public funding including User Choice and Productivity Places Program	6-12 months	Qualifications, pathways and skill sets relevant to the electrical industry are identified. Funding is accessed	Generation Transmission-Distribution and Rail

EUPA

4	Seek to influence funding agencies to provide for industry targeted training opportunities for particular skills sets as distinct from training for qualifications	1-3 years	Future PPP funding is available for skill sets.	
5	Engage with the national ISC to review the qualifications structure of the Training Package and remove unnecessary pre-requisites from higher level para-professional qualifications. Encourage the integration of new and emerging technologies, environmental management and sustainability issues and practices into existing training packages.	Ongoing	Attendance at ISC forums and facilitate industry attendance to ISC workshops. Communicate outcomes to industry stakeholders State wide.	Generation Transmission-Distribution and Rail
6	Seek to increase the capacity and capability of Registered Training Organisations (RTOs) to be in a better position to service the industry skilling needs in both the metropolitan and regional areas.	1-3 years	Continue to identify occupations on SPOL for trade trainers. RTOs to utilize industry technical experts to support training delivery Research the mechanisms of a register for individuals interested to deliver trade training. Report findings to IWG for action	Generation Transmission-Distribution and Rail
7	Encourage the delivery of the Transmission Lineworker Certificate III qualification.	6-12 months	Consult with RTO's and industry on the potential delivery. RTO's attend EUPA forums.	
		1-3 years	Delivery of the qualification in WA.	Transmission
8	Assist Horizon Power and the ISC in establishing an 'essential services officer' type qualification as a traineeship that is suitable for distribution workers in remote communities.	0-6 months	Ongoing consultations with Horizon Power and ISC.	Distribution

EUPA

9	Consult with the rail sector to establish a strategy for the training of the rail traction worker qualification.	6-12 months	Submit an application to establish a qualification as a Traineeship.	
		0-6 months	Ongoing consultations with RTO's and rail industry	Rail
		6-12 months	A rail traction worker apprenticeship or traineeship is established being consistent with the national delivery of this qualification.	
		1-3 years	A rail traction apprenticeship/traineeship is delivered in WA.	

Water Industry – Strategic Environment

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 its stakeholders, supply chain and overlap with other allied industries.

The 1994 COAG water reforms signalled major restructuring throughout the water industry. Responsibility for policy and regulation was separated from operations, and many enterprises were significantly restructured, downsized, corporatised, and some functions privatised. Many functions were outsourced to the private sector, including operations and management of water infrastructure, though in most cases the ownership of major assets was retained by the public sector and corporatised enterprises such as the Water Corporation.

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. Private sector interests cover a range of functions, summarised into categories such as consultants, contractors, manufacturers and suppliers.

There is significant overlap of functions across the interests and the scope of the organisations involved in the water sector. These functions are also changing, with the introduction of new technologies and approaches for provision of water services and expanding water-related skills areas such as environmental management and those related to climate change.

Current water demand outstrips available supply in many areas of WA as cyclical weather patterns and climate change have impacted on water supply. Water is required to sustain industry sectors such as agriculture, mining and manufacturing. It underpins urban activity as well as forming one of the key essential services associated with public health. Environmental water flows are also required to sustain the health of the river and groundwater systems

The primary drivers of the water industry are government commitments to water sources, water quality and standards, environmental sustainability and cost effective delivery of services to all communities.

The major organisations with an interest in water in Western Australia are:

- Department of Water
- The Water Corporation of WA
- Aqwest –Bunbury
- Busselton Water
- Harvey Water

- Kimberley Water
- Department of Health (Public Health)
- Australian Water Association
- Irrigation Association
- Master Plumbers and Gas Fitters Association of WA

In addition to the above the sector is also serviced by numerous contracting agencies in areas such as engineering, hydrography, and water treatment.

WA - State Water Plan – Department of Water

Source – WA Department of Water - http://www.water.wa.gov.au/ and National Water Commission- http://www.nwc.gov.au/

The Department of Water is the Western Australian government agency responsible for ensuring the state's water resources are planned, managed and developed to meet community requirements, now and in the future.

The State Water Plan 2007 provides a strategic framework to plan and manage Western Australia's water resources. It sets out broad state-wide strategic directions and policies, a framework for water planning and specific priority actions to be implemented over the next three to five years by eleven government agencies with the Department of Water taking the leading role. The plan includes an overview of water availability and use in Western Australia, current and projected trends in water demand and options available to meet these demands.

State water planning and policy frameworks are defined under the State Water Plan 2007. The state water policy framework guides water resource management in Western Australia and the state water planning framework outlines the various water plans (eight regions) that are the primary responsibility of the Department of Water.

The State Water Plan 2007 has three major components:

1. An overview of water resources, availability and use;

2. Water policy and planning frameworks; and

3. More than one hundred priority actions to progress water resources management in WA by 2011.

The Department of Water coordinates the implementation of the plan and reports on progress. In so doing the Department has identified the following ten priorities for the next five years; (2007-2012). The Department aims to:

1. within sustainable limits, allocate water to support economic development;

2. optimise water use through improved management of licensed water use, an increased focus on compliance and enforcement and the expansion of metering in priority areas;

3. move Perth towards becoming a Water Sensitive City;

4. protect and recover public water supplies;

5. facilitate a competitive and innovative water industry to deliver a high standard of water services at efficient prices;

6. protect waterway health and recover priority waterways;

7. target water resource assessment to support water resource management and state development according to a schedule determined by the current status of the resource and the projected demand for water;

8. undertake state and regional water planning to ensure the state maintains a strong strategic approach to planning for the future of water resources;

9. modernise WA water management through legislation, policy and technologies that stimulate efficiency and optimal use of water; and

10. establish market-based mechanisms to release additional water for allocation and support enhanced water trading.

EUPA

In addition to which the Department of Water has also produced its own "Strategic Workforce Plan for the Water Business - 2009 / 11. This plan articulates the Departments approach to addressing its own workforce supply and demand issues and recommends strategies to respond to these. In all, the Department has developed some eighty strategies as part of its workforce plan under the following themes:

1. Workforce design

2. Recruitment

3. Valuing and keeping staff

4. Performance

5. Planning for renewal

National Water Commission

The Commission is contributing towards improving water industry knowledge, information and skills through five Raising National Water Standards (RNWS) Program projects amounting to $4.5 million (2007-08). Projects under way include:

- A graduate course in water planning and a national water sector skills project.

- $1.231 million is going to a National Water Skills Resource Project to develop consistent standards and resources for the training and assessment of people undertaking accredited courses for improved water management in Australia.

- $80 000 is contributing to an Australian Groundwater School Review of Teaching Resources Project to improve education materials for groundwater professionals.

- A National Water Commission Fellowship Program has funded research in priority areas relevant to implementation of the NWI.

As of December 2009, COAG agreed to redouble its efforts to accelerate the pace of reform under the National Water Initiative, committing to a National Water Skills Strategy to address skills shortages in the water industry. In support of the strategy, the Australian Government has agreed to fund the following initiatives from the Raising National Water Standards program of the National Water Commission:

- **Initiative 1**: Up to $500,000 for a Pilot Program to trial development of training in water management skills for remote and Aboriginal communities. This initiative will ensure that the necessary technical skills are available in remote communities to operate and maintain the infrastructure and other facilities to be provided through a separate $50 million allocation from Water for the Future in support of the COAG Strategy on Water and Wastewater Services in Remote Communities (including Aboriginal communities).

- **Initiative 2**: Up to $250,000 for the development of skills and training standards for operators of potable water treatment facilities. This initiative aims to address the problem that no nationally agreed minimum skills and training standards currently exist for operators of potable water treatment facilities, which raises a potentially serious public health risk situation for the community.

- **Initiative 3**: Funding on a 3-for-1 matching basis of up to $250,000 to support the H2Oz water industry marketing campaign (the water industry's own initiative aimed at addressing the skills shortage); and funding of up to $100,000 to enable the Australian Water Association on behalf of the Water Industry Skills Taskforce (and with support from the National Water Commission) to develop a business plan to implement the COAG National Water Skills Strategy.

EUPA

The Commission recognises that the skills shortage in Australia's water industry is emerging as a key constraint on growth and change in the sector. Commission research suggests that fifty percent of all water utilities staff will retire over the next 5-10 years and that projected industry replacement rates fall sharply below the numbers required.

COAG - Water Skills Audit and Strategy

The Council of Australian Governments (COAG) Working Group on Climate Change and Water recognised the importance of skill and capacity shortages. In line with its recommendations, a COAG sub-group was established to develop a forward work program on human resources, skills and knowledge. Having commissioned a skills audit, a national strategy has been developed to address the gaps identified and build knowledge and research capacity.

National Water Skills Strategy

http://www.environment.gov.au/water/publications/action/water-skills-strategy.html

The key focus of this Strategy is to encourage and work with industry to build demand for and uptake of state and national training programs so that the water sector can take full advantage of the pre-existing opportunities available through existing government programs.

The findings of a national audit of labour and skills shortages in the water sector were reported to the Council of Australian Governments (COAG) in July 2008. The audit reported current and emerging labour and skills shortages in the Australian water sector, with estimates of magnitude and composition.

This audit predicted a significant emerging skills gap where nearly half of those who will be employed in the water sector in 2018 will need to be recruited over the next ten years, many of whom will require tertiary training. Key skills shortages are predicted to occur in science and engineering, management, technical and trades areas and these needs are expected to continue into the foreseeable future.

Labour and Skill Needs

In response to the global financial crisis, and based on the subsequent expectation that jobs growth may be constrained for the next two to three years, the projected skills gap forecast in July 2008 for 2018 was revised downwards by the National Water Commission. Nevertheless, there remain significant levels of commitment to invest in infrastructure projects, and it is expected that the water sector will continue to grow.

The Water Corporation and other water enterprises in Western Australia are undertaking or are about to commence major construction and maintenance projects. These organisations envisage experiencing difficulties in recruiting and retaining individuals with the skills required to undertake the design, construction and maintenance work.

The Water Corporation as the principal employer of engineering, design, technical maintenance and operational workers in the water sector across the State are also currently undertaking Workforce Development forecasting. The Corporation together with other water sector organisations have indicated critical skill shortages are likely to exist in the areas of:

- Alternate water sources and treatment technologies
- Remote essential services operators (with skills in both water and electrical)
- Operators of water distribution and treatment plant
- Project and contract management
- Engineering and asset management
- Para professional civil and structural engineers

EUPA

Table 5 – Water Occupations in Demand by ANZSCO

ANZSCO	Occupation	State Priority Occupations List (Ranking)
233211	Civil Engineers	TOP
233311	Electrical Engineers	TOP
233915	Chemical and Environmental Engineers	NOT LISTED
233512	Mechanical Engineers	TOP
2343	Chemists and Scientists	NOT LISTED
312212	Engineering Technicians	TOP
3114	Science Technicians	TOP
Sub-Major Group 33	Building/Construction Trades	TOP
342314	Electrical/Instrumentation Trades	TOP
Minor Group 323	Mechanical/Metal Trades	TOP
7129	Process/Plant Operators	HIGH
8211	Unskilled Workers/Labourers	HIGH

Issues, Barriers and Opportunities

From the National Water Skills Strategy (December 2009)

The following issues affecting the water sector are limiting its capacity to meet the reported labour and skills needs:

- Historically, the sector workforce has experienced high long-term stability, and corresponding low levels of mobility, but has been in overall decline in numbers over the last ten to fifteen years;

- Some rapidly emerging skills gaps are occurring, notably in technical, professional and managerial categories due to low levels of recruitment and training since the early 1990's, both external and in-house, coinciding with the move to corporatisation and the contracting out of many functions of water utilities at that time;

- The fragmentation of training demand, low numbers in individual enterprises and business management models make it difficult to train recruits and existing staff;

- An ageing workforce, due not only to broader demographic change but also to low levels of recruitment in the 1980s and 1990s. Resulting in the likely impending retirement of a large cohort of skilled workers which will result in significant gaps in skills and experience within the sector in the next five years. A report by the Water Services Association Australia showed that some large urban water utilities (nationally) have a poor history of workforce and succession planning;

- The existing workforce will be required to adapt to emerging demands of climate change, environmental management, new technologies, and the multidisciplinary nature of sustainable water management. Key scientific skills gaps, such as hydrologists and water modellers, are likely to impact on the industry in the near future;

- Increasingly sophisticated systems and technical processes that are changing the nature of jobs and their training requirements;

- There currently appears to be limited capacity to attract and retain recruits, linked to a decline in popularity of science and mathematics at school, the lack of water specific components of generic qualifications and the poor match of initial qualifications with occupations; for example, a very significant proportion of engineering graduates do not choose to work as engineers; and

- In some sectors of the water industry, notably rural and urban irrigation (design, installation and management), there is currently little recognition of the value of training or qualifications and career paths are ill-defined.

The most significant pressures likely to impact on the water industry in Western Australia in the future are as follows:

- Population Growth, related to installation new infrastructure and maintenance of existing infrastructure

- Climate Change – Government policy and growing community awareness is emphasising the need for a clean, green, sustainable environment premised on effective water management practices.

- Government Policy related to water use

- Technological advances – related to water sources, treatment, recycling etc.

EUPA

- Competition from other industry sectors for employees with similar skill sets. The industry is expecting to lose engineers, technicians, tradespeople and plant operators to the resources sector as was the case in the last resources boom.

Barriers to Employment and Training

- The National Audit of Water Skills (July 2008) noted demand for and supply of skilled labour to the water industry is strongly influenced by some key past trends, including extensive corporatisation and the contracting out of many functions of water utilities in the 80s and 90s, and a resulting reduction in the level of in-house training provided by employers.

- Too few Registered Training Organisations (RTOs) are scoped to deliver the Water Industry Training Package in Western Australia or have the capability nor capacity to meet demand

- There are few regional RTOs scoped to deliver the Water Industry Training Package and they do not have the capability nor capacity to meet local demand or provide services across all streams of the water package

- There has been a limited take up by industry of the Water Industry Training Package outside of the larger water utilities

- The relative attractiveness of the water sector and general awareness of school leavers of the opportunities that exist in the sector and no school based traineeship opportunities which would help with career attraction

- Graduate supply issues arising from lower uptake of science and engineering courses.

- The capacity of RTOs to expand their delivery outside of larger water utilities means much of the enterprise driven training sits outside of the water industry training package and/or National Training Framework and hence not eligible for funding.

- Water enterprises continuously express concern regarding the scope of capacity and quality of delivery of a number of training providers. Typically, these relate to availability, capability, experience and expertise of instructors. The prevailing view is that there is a lack of capacity to deliver nationally recognised training with insufficient providers of quality training and assessment for the full scope of requirements for the water industry.

- PPP (and EBPPP) subsidies for training apply only to full qualifications, while not all career progression and skills needs require a full qualification. Industry has supported the introduction of skill sets, which apply to discreet work roles and may be a small number of specialist competencies. Skill sets are not funded under PPP or any state program funding. Government Agencies often cannot access such funding.

- Specialised skills shortages in the water sector have generally occurred because industry has not invested in training for the future, preferring instead to 'buy in' the skills on as as-needs basis.

Potential Opportunities

- The State Water Plan (2007) places a strong emphasis on community education yet the plan does not comment on the skills and capabilities of the workforce required for its implementation.

- 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.

- Many industry organisations are not accessing publicly funded training opportunities through the utilisation of traineeships, apprenticeships or cadetships.

- Outside of larger water utilities, there is little national recognition achieved for informal training undertaken and less opportunity is provided to complete training as part of a workforce development strategy.

- RTOs operating in the Water Sector have not yet developed flexible delivery strategies to service training demand from regional areas, e.g. blended learning, on-the-job existing worker traineeships etc.

- Priority qualifications from the Water Training Package. Certificates II, III, IV and the Diploma of Water Operations have been registered by Government Skills Australia (GSA) as priority skills levels.

Australian Government Initiatives to Support the National Water Skills Strategy

As stated previously, COAG agreed to redouble its efforts to accelerate the pace of reform under the National Water Initiative (NWI), committing to a National Water Skills Strategy to address skills shortages in the water industry. In support of the strategy, the Commonwealth Government has agreed to fund three specific initiatives from the *Raising National Water Standards* program of the National Water Commission. (Noted previously)

Industry-based training and skills development initiatives

In March 2008, the National Water Commission, Water Services Association of Australia and Australian Water Association hosted a CEO-level Water Skills Forum that led to the establishment of the Water Industry Skills Taskforce (WIST). The WIST was established to promote and oversee a nationally coordinated effort to address the skills shortage in the water sector. Representatives on WIST come from peak bodies, water industry and related education and government sectors (water utilities, consulting engineers, infrastructure, irrigation and vocational and university sectors).

WIST has now endorsed three industry-led programs to build demand for and uptake of training related initiatives. These programs are based on previous work done by industry reference groups through the Water Industry Capacity Development (WICD) network, and, in the case of the Mentoring Program, the Australian Water Association's Young Water Professionals network. The programs currently endorsed by the Taskforce are:

1. *H2Oz Careers in Water Campaign:* The H2Oz recruitment campaign is developing the H2Oz brand to raise awareness of the unique opportunities offered by a career within the water industry, with its key focus to attract skill and talent to the sector.

2. *Water Industry Mentoring Program:* The industry-wide mentoring program is being developed to provide opportunities for less experienced members of the industry and to pass on the tacit knowledge held by experienced members. The program aims to provide a structured approach that ensures the transfer of knowledge and experience held in the industry, to younger and less experienced professionals.

3. *Water Industry Secondment Program:* The water industry secondment program is being developed to provide organisations with the opportunity to build and develop greater capacity by providing employees flexibility and development opportunities through secondments (to and from) other organisations in the industry. This program will be funded through WICD and provided as a benefit to the WICD Network's subscribers. The WIST will need to further identify initiatives and approaches that will enhance the capacity of the education and training sector to meet the requirements of the water industry

EUPA

It should be noted however from a WA industry point of view that the mentoring and secondment programs, appear to have lost momentum with little up-take by industry.

Action Plan/Priority Actions

National Water Skills Strategy

The objectives for the National Water Skills Strategy are to:

1. Attract and retain skilled staff in the water industry, whilst giving due consideration to the effects of market forces on staff availability, including in rural and regional areas;

2. Augment the technical skills base in the water industry, through actively promoting demand for skills development and training;

3. Improve the training and skills support base for rural water managers (such as councils and property managers); and

4. Develop a capacity building strategy for remote and regional communities, particularly Aboriginal communities, to build practical skills in water resource management and planning.

The strategy seeks to find ways that governments and industry can work collaboratively to build a well-skilled and adaptable water industry workforce. In producing an action plan for the implementation of the strategy the Water Commission sought feedback from State jurisdictions to indicate what actions are being undertaken or considered.

The criteria from the National Water Skills Action Plan have been consolidated into the themes of the Workforce Development Plan as follows:

- Labour market and supply
- Workforce participation
- Planning and co-ordination
- Attraction and retention
- Training and productivity

Labour market and supply

	Strategy	Timeline	Measures of Success
1	Encourage an assessment of which occupations are likely to be impacted by workforce demand changes resulting from climate change.	6-12 mths	EUPA will research the impact adoption of new technologies in water collection, processing and disposal will have on future labour demand and skilling needs of the workforce.
			Identify future labour and skilling demands not yet evident as new technologies are adopted.
		1-3 years	Future iterations of this Workforce Development Plan include information on the impact of the adoption of new technologies.
			Communicate the water industry's needs to those Training Councils where workforce and skilling needs overlap e.g.
			Manufacturing – engineers, trades
			Construction - having responsibility for mobile plant operators
2	Consider needs for stream-lined procedures for rapidly increasing the water sector skilled workforce; for example through immigration via employer-sponsored categories or by exploring employment of temporary skilled migrants	6-12 mths	The State Priority Occupations List includes those professional and trade occupations required by the industry.
		1-3 years	Influence the State Skills Migration Strategy to ensure emphasis is placed on the professional and trade occupations relevant to the industry.
		3-5 years	Future industry workforce profiles reflect new occupations

EUPA

Workforce participation

	Strategy	Timeline	Measures of Success
1	Encourage research into international comparative studies and good practice in workforce participation strategies		WA engagement and participation in national research initiatives
2	Improve the Water Skills Support Base for Rural, Regional and Remote Communities, Including Building Practical Skills in Water resource Management, Planning , and Operations and Maintenance for Aboriginal Peoples		Engage the Aboriginal Workforce Development Centre to promote employment opportunities to indigenous people Promote the Water Corporation indigenous employment covenant
3	Develop and promote strategies that increase the skills of people in the water industry in rural, regional and remotes areas.		Regional RTOs deliver Water industry qualifications
4	Promote employment in the water industry as an attractive industry for Aboriginal Australians in regional, remote, rural and urban communities by: • using existing employment programs for Aboriginal peoples to build skills in water resource management, planning and operations and maintenance through growing the supply of and demand for job-ready candidates • working in partnership with employers and training providers to develop innovative ways to ensure appropriate training is available in remote communities • building pathways from school to work in the water resource management sector • Building the capability of employers to provide effective Aboriginal employment strategies. This will include strategies aimed at the retention and career advancement of current Aboriginal employees • the development and delivery of an industry awareness program to create awareness about the range of education, training and employment initiatives available to support, train and recruit Aboriginal employees • Accelerate adoption of Education and training as Core Business		Local Government employment opportunities identified Initiatives established for the training and employment (traineeships) of underrepresented groups specifically targeting women and Aboriginal people. Identification of job roles that could be modified to make employment in the industry more attractive to Aboriginal people Production of a Career Advisory resource suitable for use with school leavers and career changers

EUPA

Planning and coordination

	Strategy	Timeline	Measures of Success
1	Encourage the development of planning for potential demand based on scenarios of climate change mitigation ranging from no Government action to extensive action;	6-12 mths	Increase the EUPA Training Council profile in industry beyond that of the Dept of Water, Water Corporation and AWA, so that relationships are also established with private water related organisations.
		1-3 years	The number of water industry stakeholders that provide input to EUPA is increased
		3-5 years	Future editions of the State Water Plan include reference to skilling needs of the workforce
2	Research into, and collect data on: 1. Demographic trends to provide a framework to encourage organisations to adapt and plan for future skills requirements in the context of an ageing workforce and retirements in the next decade 2. Workforce skills development to provide a framework to encourage organisations to adapt and plan for future skills requirements, particularly to increase innovation and productivity; and 3. Workforce trends and emerging skills needs	6-12 mths 1-3 years 3-5 years	Obtain accurate data of employment numbers in the sector specifically related to Western Australia. Production of a profile of the industry based on reliable data sources. Development of an industry occupational profile based on nationally recognised competencies, skills sets and qualifications. The establishment of a skills set and / or qualifications for these emerging job roles for inclusion in the water industry training package.

EUPA

Attraction and retention

	Strategy	Timeline	Measures of Success
1	Develop and implement a range of financial and non-financial incentives to attract and retain skilled workers to the water sector	1-3 years	Work with "water enterprises" to develop attraction and retention strategies relevant to their workforce needs, such as: • Offering flexible employment arrangements • Creating a family friendly workplace • Provision of a reward and recognition program • Permanent employment rather than part-time or contract positions • Succession planning • Phasing employees from work to retirement The number of water enterprises seeking assistance to undertake job / role redesign to make the industry more attractive as an employer
2	Promote Interest in Water related Disciplines amongst school leavers Enhance student interest in water related disciplines by engaging relevant existing government initiatives, including Australian School Based, Apprenticeships, the VET in Schools program, the Trade Training Centres program and/or the Australian Apprentices programs National career advice networks, to assist with the provision of career advice relating to current and future employment opportunities in the water sector	6-12 mths 1-3 years	Careers and employment opportunities in the water sector are promoted through initiatives such as SkillsWest Engagement of employment service providers and career advisors in the promotion of the industry to potential employees Funding for the production of career advisory materials is secured Production of career advisory materials suitable for those seeking employment in the sector.
3	Promote the importance of minimum skills standards in the design, installation and maintenance of Irrigation infrastructure	1-3 years	Work with water enterprises to undertake job / role redesign to make the industry more attractive as an employer

EUPA

Training and productivity

	Strategy	Timeline	Measures of Success
1	Investigate feasibility of linking water infrastructure funding to required training and development for the water industry	6-12 mths	Mechanisms for the provision of skills recognition services to encourage the engagement of the existing workforce in nationally recognised training arrangements are established
		1-3 years	Skills recognition services are made available to the industry
			An employment frame work based on the attainment of nationally recognised qualifications is established.
			A training culture within the industry based on the attainment of nationally recognised qualifications is in place
2	Assist industry to develop a guide with examples of best practice businesses where training contributes to increased productivity, reduced opportunity costs of business and improved worker engagement, and enhanced brand loyalty	6-12 mths	Project funding is sourced
		1-3 years	Best practice guide produced
3	Fully utilise training funding sources for industry, to develop targeted training for particular skills sets as distinct from training for qualifications	6-12 mths	Industry awareness of available publicly funded training opportunities is increased
	Identify qualifications, career paths and skill sets relevant to the water industry, access training places and improve the demand for uptake of training under the Productivity Places Program	1-3 years	Seek the introduction of an existing worker traineeship for the industry
			The number of water organisations engaging in national training arrangements is increased
		3-5 years	Water organisations are taking advantage of publicly funded training opportunities
			The numbers of those involved in water management traineeships is increased
4	Industry skills councils and state Training Authorities to support the design and delivery of water specific educational and training/mentoring programs	6-12 mths	Increase the number of RTOs operating in the water sector
			Seek to increase the capacity and capability of Registered

EUPA

	Utilize industry technical experts to support training delivery by training providers	1-3 years	Training Organisations (RTOs) to be in a better position to service the industry skilling needs in both the metropolitan and regional areas.
			Qualifications and skill sets are available to train for the new occupations becoming evident.
5	Assist the tertiary education system to support the design, development and delivery of water specific educational programs, recognising the incentives that exist for universities to tailor courses to meet industry requirements		Discussions with the Tertiary sector commenced
			Engagement with the National Water agencies
6	Increase and reinforce Australia's international competitiveness and reputation in water management through the development of a nationally and internationally consistent branding strategy		Engagement with the National Water agencies
7	Increase demand for new water related technologies in line with the National VET Sustainability Action Plan		Engagement with the National Water agencies
8	Include education and training in **business plans** at levels consistent with the scale of the current and emerging labour and skills shortages	6-12 mths	Future editions of the State Water Plan make comment on workforce capability and skilling requirements for its implementation.
	Include specified investments in education and training in tender responses for governments' water sector projects, contracts and programs		
9	Encourage the integration of knowledge about new and emerging technologies, environmental management and sustainable water practices into existing training packages	6-12 mths	Additional RTOs scoped to deliver water related nationally recognised training.
	Encourage industry level analysis and planning to appropriately link minimum skills standards and training to broader public risk management, particularly for water treatment facilities	1-3 years	Funding support is sourced to assist the RTOs produce resources that will allow for regional access to training services
			The National ISC as the developer of the training package includes competencies, skill sets and qualifications in future editions of the training package.

Gas Industry Strategic Environment

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 one or more of the following; 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.

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.

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.

Gas Pipelines in Western Australia

There are currently four major natural gas transmission pipelines supplying the Western Australian gas market:

- 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 kilometres) 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.

Distribution Networks

WA Gas Networks is the owner and operator of the majority of the reticulated gas infrastructure in Western Australia. The gas reticulation networks serve Geraldton, Kalgoorlie, Albany, Bunbury, Busselton, Harvey, Pinjarra, Brunswick Junction, Capel and the Perth greater metropolitan area including Mandurah. These combined networks constitute over 12,800km of gas mains and associated infrastructure.

Over the last five years the annual growth of these networks has been approximately 250km with an average annual new customer connection rate of 20,000.

EUPA

Natural Gas Usage

Western Australia is the most energy and gas-dependent economy in Australia. 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. Most of the remaining gas is used for electricity generation and by other smaller industrial and commercial users. Residential gas users consume only about 2% of the natural gas produced in the state.

Liquefied Petroleum Gas (LPG) (From Wesfarmers Website)

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.

Wesfarmers Kleenheat Gas Pty Ltd is part of Wesfarmers Energy Limited. Kleenheat Gas is 100 per cent owned by Wesfarmers Limited and has around 550 employees and contractors. In regional and outer metropolitan areas bottled LPG typically contained in 45kg cylinders is a widely used energy source for household appliances.

Labour and Skill Needs

The Gas industry is currently suffering from skill shortages, predominantly due to; industry rationalisation, employment insecurity due to potential takeovers and splintering and specialisation of the workforce due to the trend of outsourcing and sub-contracting.

Anticipated pressure on the labour force due to resource projects requiring a workforce comprised of the same skill requirements

Table 6 – Gas Occupations in Demand by ANZSCO

ANZSCO	Gas Transmission Occupation	State Priority Occupations List (Ranking)
2335	Mechanical Engineer	TOP
2333	Chemical Engineer	TOP
2331	Chemical & Materials Engineer	TOP
1399	Project Director/ Managers/ Analysts	YET TO BE RESOLVED
3992	Control Room Officers	PRIORITY

ANZSCO	Gas Transmission Occupation	State Priority Occupations List (Ranking)
3126	Risk & Safety Engineers	NOT LISTED
2621	GIS and SCADA specialists	PRIORITY
3122 & 3123	Draftspersons and Technicians	TOP
3122 & 3123	Maintenance Planners & Schedulers	TOP
3411	Field Service Technicians (Instrumentation, Electrical)	TOP
3125	Mechanical Fitter	TOP
3223	Welders	TOP
2335	Mechanical Engineer & Associate Engineer	TOP
2333	Electrical Engineer & Associate Engineer	TOP
2331	Chemical & Materials Engineer & Associate Engineer	TOP
3992	Control Room Officers	PRIORITY
3122 & 3123	Maintenance Planners & Schedulers	TOP
3122 & 3123	Draftspersons	TOP
334114	Gas Distribution Officers/Main and Line Fitters	TOP
3126	Gas Installation Inspectors / Risk & Safety Engineer	NOT LISTED
3223	Welders/Pipefitters	TOP

Skill Shortage areas by ANZSCO – Liquefied Petroleum Gas (LPG)

There is no data available at this time
Job roles are more aligned to Gas Production, Transportation and Retail

EUPA

Issues, Barriers and Opportunities

Industry representatives have identified the following workforce development and training issues:

- Competition from the resources sector for employees with similar skill sets. The industry is expecting to lose engineers, technicians, and tradespeople to the resources sector as was the case in the last boom.

- EE-Oz reports that by 2013, forty-seven percent of those employed in the gas sector (operations) will be at or nearing retirement age; and that n 5 Years time, 65% of gas management or leadership roles will be at or nearing retirement age. These figures are consistent with those produced by DEEWR.

- The Gas sector has moved from being a State Government owned utilities corporation (Alinta) through various privatisation arrangements to an industry which is now multifaceted though very specialised. The most significant outcome being the prevalence of contracting and sub-contracting the construction of the transmission pipelines and the distribution networks to organisations that do not see themselves as gas enterprises.

- This has led to little uptake of the Gas training package so far by industry as a basis of qualifying those that construct, install or maintain the various pipelines and networks.

- The subsequent contracting arrangements have led to specialisations being developed within the workforce where employment usually requires a trade qualification (usually electrical or mechanical fitters with instrumentation skills) supplemented by additional on-the-job training which may not be nationally recognised.

- The national Industry Skills Council (EE-Oz) is working to achieve greater acknowledgement of the Gas Sector and associated professions in the ANZSIC and ANZSCO codes to give greater clarity to the sector in defining career paths.

- There are too few RTOs in WA (3) with scope to deliver the gas sector qualifications, particularly for higher level qualifications. In this regard, there has been a call for an investigation into best practice auspice arrangements (partnership) between industry and training organisations to allow for existing worker traineeships and on-job training delivery.

- Those that lay the distribution networks have advocated for the development of a skill set for service layers, drawn from the training package but below a full qualification, and the promotion of prevocational and pre-apprenticeships programs as tools to promote the industry to young entrants.

- Asset owners place no minimum qualification requirement for workers in the industry as is the case in Victoria where all technicians are required to be Certificate II qualified.

- The current industry training package is in need of modification to make it more relevant to industry's needs; there is concern that qualifications should accurately and simply represent the skills workers need and as such the current training package is considered to be too complex.

- The Gas Industry Working Group expressed interest in investigating a move from traineeships to apprenticeships believing potential benefits include:
  - additional government funding
  - formalise training for the sector
  - presenting new participants with strong career progression based on practical skills

However it should be recognised that there have been no enrolments in the established Level 2 Gas Traineeship in WA for the past four years.

EUPA

Action Plan/Priority Actions

Labour Market and Supply

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Influence the state skilled migration/skilled occupation list	6-12 months	Utilise environmental scan to reference against the Department of Training and Workforce Development (DTWD) State Priority Occupations List (SPOL).
			Qualifications in skills demand areas are being delivered by RTO's and funding is allocated from DTWD for delivery these qualifications
		1-3 years	Agencies influential in having the ability to rapidly increase the size of the Gas sector skilled workforce are identified and consulted on a regular basis.
			Critical occupations reflected within the State SPOL.
		3-5 years	Monitor and advise DTWD of changes to skilled occupation requirements
2	Work with the regulator on the introduction of proposed national licensing for gas workers including processes for migrants to attain the licensed outcome.	1-3 years	Explore the requirement of skills assessment for all migrants to attain the licensed outcome.
			IWG produce policy on introduction of licensing arrangements.
			EUPA advice provided to regulator on industry position with respect to licensing requirements.
3	Undertake an assessment of which Gas occupations are likely to be impacted by competition from other industry sectors	6-12 months	Occupations identified and communicated to DTWD.
		1-3 years	Build upon established relationships with Industry and RTO's to evaluate the skills shortages and encourage the uptake of more apprentices/traineeships in the sector.
			Annual update provided to DTWD.
			Future editions of Workforce Development Plan (WDP) to make reference to the competition from other industries for Gas workers.

EUPA

4	Undertake an assessment of the workforce demand changes that are likely to result from adopting technologies related to climate change.	6-12 months	Funding sources identified for project.
			Research the impact adoption of new technologies in will have on future labour demand and skilling needs of the workforce
		1-3 years	Project completed and a report produced.
			The WDP is updated accordingly.
		3-5 years	Future iterations of this Workforce Development Plan include information on the impact of the adoption of new technologies.
5	Broaden EUPA's Industry contacts and work with stakeholders to develop a short term strategy designed and implemented to address the current skills crisis.	6-12 months	Continued operation of the IWG with regular meetings
			Increased take up of established Traineeships in Gas Distribution.
		1-3 years	A long term strategy is developed for training in the industry to meet skills needs.
			A significant increase in the recruitment of apprentices/trainees in the sector.
		3-5 years	The long term strategy is adopted by the industry.
7	Increase the number of training organisations State wide capable of delivering Gas related apprenticeship/traineeship qualifications	Ongoing	Industry and RTO forums conducted (twice annually).
			Consultations and visits to RTO's with potential to deliver in this industry sector.
			More RTO's delivering qualifications relevant to the Gas sector
8	Build better relationships in regional areas to establish the skills and training needs of each area.	6-12 months	EUPA representatives attending regional group meetings or contribute without being in attendance.
	Encourage RTO's to deliver more training regionally and be innovative in their approach	1-3 years	Training becomes more accessible to regional people and more diverse Gas traineeships/apprenticeships become available.
		3-5 years	There is a significant increase in the uptake and completion of Gas apprenticeships/traineeships regionally, producing more tradespeople in those areas.

EUPA

Workforce Participation

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Increase awareness with employers of the benefits of providing employment opportunities to underrepresented groups (Aboriginal, women, disabled)	6-12 months	Development and promotion of an industry awareness program about the range of education, training and employment initiatives available to support, train and recruit those from underrepresented groups
2	Promote the employment of underrepresented groups to industry Identification of job roles that could make employment in the industry more attractive to women	1-3 years	Initiatives established for the training and employment of underrepresented groups specifically targeting women and Aboriginal people. Increase the participation of women in non-traditional job roles such as operatives, technicians and draftspersons
3	Facilitate the establishment of partnerships between employers and training providers to develop innovative ways to ensure appropriate gas training is available in the regions and remote communities	3-5 years	Partnerships established Aboriginal people engaged in gas training opportunities
4	Raise awareness among careers advisors of the academic requirement (literacy and numeracy) for entry into gas apprenticeships/traineeships.	1-3 years	Produce an information brochure for distribution to high school career advisor network. Brochure available through EUPA website. Increase in individuals undertaking EE-Oz online assessment.

EUPA

Planning and Coordination

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Create new and build on existing relationships within the Gas sector.	6-12 months	Undertake an extensive research project to establish fully the labour needs of the Gas sector, Determine labour market and supply issues/concerns that impact upon the sector.
		1-3 years	A long term training strategy is designed and implemented to service the Gas related companies. Awareness in Gas industry of the opportunities that exist through national training package arrangements to qualify operators.
3	Research into: • Demographic trends to provide a framework to encourage Gas companies adapt and plan for future skills requirements in the context of: 1. Loss of workers to the resources and energy sectors; 2. An ageing workforce and retirements in the next decade • Workforce skills development to provide a framework to encourage Gas companies to adapt and plan for future skills requirements, • Workforce trends and emerging skills needs	1-3 years	Project reports completed. WDP updated with results and findings communicated to industry stakeholders.
4	EUPA work closely with renewable energy organisation to establish the needs of the sector, informing RTO's and the IWG of any developments in the sector.	6-12 months	EUPA to engage organisations in the renewable energy sector and share data on workforce planning. EUPA to maintain membership of the Sustainability Energy Association and attend regular forums.
		1-3 years	EUPA produce a strategic plan for engagement in the renewable energy sector.

EUPA

Attraction and Retention

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Promote interest in Gas related occupations amongst school leavers	6-12 months	Pathways from school to work in the Gas sector are promoted to those that provide career advice in schools.
2	Work with Gas enterprises" to develop attraction and retention strategies relevant to their workforce needs, such as: • Offering flexible employment arrangements • Creating a family friendly workplace • Provision of a reward and recognition program • Creating job pathways from operating positions to training mentors for older/experienced workers • Permanent employment rather than part-time or contract positions • Succession planning Phasing employees from work to retirement • Addressing the issue of a transient workforce	1-3 years	Examples of possible attraction and retention strategies are developed and promoted to industry. The number of Gas enterprises seeking assistance

EUPA

Training and Productivity

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Promote the establishment of a Utilities 'Centre of Excellence' for the Gas, Water, Waste, Electricity Supply and Telecommunications Industries.	6-12 months	Conduct a feasibility study for the Centre of Excellence.
		1-3 years	A submission produced for presentation with a model for the Centre.
2	Assist Gas contractors access training places and improve the demand for uptake of training under the various forms of public funding including User Choice and Productivity Places Program	3-5 years	Training commences in the Utilities Centre of Excellence with the possible inclusion of an assessment centre for assessing migrant workers and other end of Apprenticeship/Traineeship assessments the industry.
		6-12 months	Qualifications, pathways and skill sets relevant to the gas industry are identified.
			Funding is accessed
3	Seek to influence funding agencies to provide for industry targeted training opportunities for particular skills sets as distinct from training for qualifications	1-3 years	Future PPP funding is available for skill sets.
4	Engage with the national ISC to review the qualifications structure of the Training Package. Encourage the integration of new and emerging technologies, environmental management and sustainability issues and practices into existing training packages.	Ongoing	Attendance at ISC forums and facilitate industry attendance to ISC workshops. Communicate outcomes to industry stakeholders State wide.
5	Seek to increase the capacity and capability of Registered Training Organisations (RTOs) to be in a better position to service the industry skilling needs in both the metropolitan and regional areas.	1-3 years	Continue to identify occupations on SPOL for trade trainers. RTOs to utilize industry technical experts to support training delivery. Research the mechanisms of a register for individuals interested to deliver trade training. Report findings to IWG for action

EUPA

Waste Industry Strategic Environment

The waste industry in Western Australia can be divided into three major segments, being the municipal solid waste (MSW) sector, commercial and industrial (C&I) waste sector and the construction and demolition (C&D) waste sector and each of these sectors is supported by ancillary services.

Within each of the waste sectors, there are activities undertaken that involve waste collection, which is essentially transport logistics, the processing and treatment of waste, normally undertaken within a processing 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.

The changes in the waste management industry relate to the growth in the quantities of waste generated and the methods uses for the collection, treatment and disposal of the waste.

The development of waste management policies in Western Australia is at an early stage and the first State Waste Strategy is currently being developed, and is in a draft form. (May 2010)

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.

If finally adopted, 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.

Recycling

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. They 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.

Industry Growth

The waste industry in Western Australia employs relatively small numbers of people and no data is available to provide an accurate indication of employment by occupational category on a WA state basis.

EUPA

However the industry is predicted to grow by 2.4% per annum as a result of growth in the following economic drivers:

- State's population,
- General economic activity in the State; and
- Building and construction industry.

Labour and Skill Needs

The predicted future critical job roles for the waste industry include occupations such as:

Table 7 – Waste Occupations in Demand by ANZSCO

ANZSCO	Occupation	State Priority Occupations List (Ranking)
7331	Truck Drivers (Waste Collection Truck Drivers)	HIGH
7219	Mobile Plant Operators (Landfill)	PRIORITY
3992	Operators (Waste Recovery Facilities)	NOT LISTED
1335	Production Managers (Waste Manager of Waste Recovery Facility)	NOT LISTED
2343	Environmental Scientist	NOT LISTED
2335	Mechanical Engineer or Operations Engineer	TOP
2332	Construction Engineer	TOP
3232	Plant Fitter	TOP
3411	Electrician / Instrumentation Fitter	TOP

EUPA

In addition to which, the move to increased recycling and processing of waste is being driven by emerging government policies which is influencing the adoption of new technologies and work systems. New and emerging job roles that are predicted to eventuate as a result of the implementation of government policies and the move towards "zero waste" include:

Waste Collection	Waste Treatment
Waste Trackers	Customer Service staff
Waste Education Officers	Waste Treatment Plant Operators
Waste Auditors	Waste Treatment Plant Mechanics / Fitter
Roaming Educational Officers	Waste Treatment Store person
Recyclers / Sorters	Transport Drivers
Customer Service staff	Environmental Scientists and Engineers specializing in Waste Treatment processes

Issues, Barriers and Opportunities

The most significant future pressures impacting on the waste industry in Western Australia are as follows:

1) Increasing costs to handle waste

2) Recycling

3) Legislative requirements

4) Attracting and retaining staff (at depot level)

The industry has identified the following labour and skilling issues, barriers to employment and training as well as potential opportunities related to the above:

- Government policy and growing community awareness is emphasising the need for a clean, green environment premised on effective waste management practices, however these policies are not being translated into effective workforce development strategies

- A distinct gulf in employee qualification requirements exists within the sector where there is a strongly held perception across the industry that operators are not required to hold any form of waste management qualifications

- Industry is expecting to lose "Drivers" and "Mobile Plant Operators" to the resources sector as was the case in the last resources boom.

- No career path with a structure based on the attainment of relevant qualifications exist at the operator / pre-supervisory level.

- The predominantly ageing workforce (outdoor) is not particularly interested in the achievement of waste industry related qualifications

- Industry has identified that recycling, waste treatment and waste reduction will be the major priority areas for skilling in the foreseeable future.

- The skilling needs of the waste sector are changing insomuch as the waste to energy initiatives are now impacting on the industry.

Barriers to Employment and Training

Industry representatives identified the following as potential barriers to employment and training:

- There is lack of a training culture or commitment to nationally recognised training within all sectors of the industry.

- There is an industry wide lack of awareness of what nationally recognised training opportunities are available and very little nationally recognised vocational education and training (VET) is accessed by the industry.

- Many commentators were not aware of the publicly funded training opportunities available to the industry in the form of User Choice funding (Traineeships) or Productivity Places Program funding (PPP).

- The cost of training is seen as prohibitive especially so to regionally based organisations and regional organisations have a preference for training to be available locally.

EUPA

- It is expected the Resource projects will again attract workers from the sector to undertake either waste management activities as part of the project or as labour for other roles such as mobile plant operations or truck drivers.

- At the depot and operator level, individuals entering the industry are only required to hold a Heavy Rigid truck driver's licence and any further informal training in waste collection, handling and recycling is provided on-the-job.

- Where training is accessed to provide for a licensed operator outcome it is generally sourced from Registered Training Organisations (RTOs) from other industry sectors such as Transport & Logistics or Building and Construction for Plant Operator tickets.

- While most of the professional and trade occupations required by the industry are included on the new "Skilled Occupation List" (Department of Immigration and Citizenship May 2010), those occupations predicted to be in demand such as plant operations, drivers and waste processing/recycling are not on the "list". Therefore skilled migration for these occupations may not be a recruitment option.

Potential Opportunities

The soon to be released State Waste Strategy (Draft May 2010) places a strong emphasis on community education yet the draft strategy does not comment on the skills and capabilities of the workforce required to implement the Strategy.

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 such as recycling, landfill and waste to energy initiatives.

As much of the current training delivery in the waste sector is not nationally recognised, the industry is not accessing publicly funded training opportunities through the utilisation of traineeships, apprenticeships or cadetships.

No examples of skills recognition strategies were identified in the conduct of the industry survey. That is, there is no national recognition achieved for any of the informal training undertaken and little opportunity is provided to complete training as part of a workforce development strategy.

RTOs operating in the Waste Sector have not yet developed flexible delivery strategies to service training demand from regional areas, e.g. blended learning, on-the-job existing worker traineeships etc.

Action Plan/Priority Actions

Labour market and supply

	Strategy	Timeline	Measures of Success
1	Ensure the industry needs for increased numbers of Truck Drivers and Mobile Plant Operators is communicated to those sectors that train for these occupational groups. Work with industry, particularly the WMAA, WALGA and Local Government agencies to formulate retention strategies aimed at offsetting the predicted impact of competition for labour from other industry sectors. (see 3.4)	6-12 months	Communicate the waste industry's needs to those Training Councils where workforce and skilling needs overlap e.g.: Logistics - (HV licensing) to ensure there is a sufficient supply of licensed drivers. Construction - having responsibility for mobile plant operators. Local government agencies seek advice and assistance from EUPA in the formulation and implementation of labour retention strategies.
2	Research the impact adoption of new technologies in waste collection, processing and disposal will have on future labour demand and skilling needs of the workforce.	1-3 years	Future iterations of this Workforce Development Plan include information on the impact of the adoption of new technologies.
3	Influence the State Skills Migration Strategy to ensure emphasis is placed on the professional and trade occupations relevant to the industry.	1-3 years	The State Skills Migration Strategy and occupations in demand lists include those professional and trade occupations requirement by the industry.
	Continue to work with industry stakeholders to identify future labour and skilling demands not yet evident as new technologies are adopted.	3-5 years	Future workforce profiles reflect new occupations such as Waste Tracking, Waste Auditing and Roaming Education Officers.

Workforce Participation

	Strategy	Timeline	Measures of Success
1	Work with the industry associations (WMAA and WALGA) to build awareness of employment opportunities in the industry	6-12 months	Production of a Career Advisory resource suitable for use with school leavers and career changers
2	Promote the employment of underrepresented groups to industry	1-3 years	Identification of job roles that could be modified to make employment in the industry more attractive to women
			Initiatives established for the training and employment (traineeships) of underrepresented groups specifically targeting women and Aboriginal people.
			Increase the participation of women in non-traditional job roles such as truck drivers and mobile plant operators
3	Work within the industry associations to establish a career structure for "waste employees" based on the acquisition of skills and qualifications.	3-5 years	Increased uptake of nationally recognised training by the industry.
			Job advertisements specify nationally recognised qualifications.

EUPA

Planning and coordination

	Strategy	Timeline	Measures of Success
1	Influence the State Waste Strategy to ensure it provides direction on the need for stakeholders to have a skilled workforce capable of implementing the Strategy. Increase the Training Council profile in industry beyond that of the WMAA and WALGA, so that relationships are also established with private waste treatment organisations.	6-12 months	Future editions of the State Waste Strategy include reference to skilling needs of the workforce Training providers ensure the workforce is trained in matters related to governing legislation The number of waste industry stakeholders that provide input to EUPA is increased.
2	Prepare industry for the introduction of emerging occupations of Waste Tracking, Waste Auditing and Roaming Education Officers	1-3 years	Development of an industry occupational profile based on nationally recognised competencies, skills sets and qualifications. The establishment of a skills set and / or qualifications for these emerging job roles for inclusion in the PRM Asset Maintenance national training package.
3	Obtain accurate data of employment numbers in the sector specifically related to Western Australia.	3-5 years	Production of a profile of the industry based on reliable data sources.

EUPA

Attraction and retention

	Strategy	Timeline	Measures of Success
1	Careers and employment opportunities in the waste sector are promoted. Engage employment service providers in the promotion of the industry to potential employees	6-12 months	Production of career advisory materials suitable for those seeking employment in the sector.
2	Work with "waste enterprises" to develop attraction and retention strategies relevant to their workforce needs, such as: • Offering flexible employment arrangements • Creating a family friendly workplace • Provision of a reward and recognition program • Permanent employment rather than part-time or contract positions • Succession planning Phasing employees from work to retirement	1-3 years	Examples of possible attraction and retention strategies are developed and promoted to industry. The number of waste enterprises seeking assistance
3	Work with waste enterprises to undertake job / role redesign to make the industry more attractive as an employer	3-5 years	The number of waste enterprises seeking assistance

Training and productivity

	Strategy	Timeline	Measures of Success
1	Communicate nationally recognized training developments to the existing stakeholders in metropolitan and regional areas of opportunities and developments within the nationally recognised training framework. Build industry awareness of available publicly funded training opportunities Seek the introduction of an existing worker traineeship for the industry	6-12 months	The number of waste organisations engaging in national training arrangements is increased Waste organisations are taking advantage of publicly funded training opportunities The numbers of those involved in waste management traineeships is increased
2	Increase the number of RTOs operating in the waste sector Seek to increase the capacity and capability of Registered Training Organisations (RTOs) to be in a better position to service the industry skilling needs in both the metropolitan and regional areas. Ensure qualifications and skill sets are available to train for the new occupations becoming evident, specifically in recycling, waste treatment and waste reduction.	1-3 years	Additional RTOs scoped to deliver waste related nationally recognised training. Funding support is sourced to assist the RTOs produce resources that will allow for regional access to training services The National ISC as the developer of the training package includes competencies, skill sets and qualifications in future editions of the training package.
3	Promote the development of an induction program for individuals entering the industry similar to that which exists in other industry areas i.e. blue card etc	1-3 years	Establishment of an industry managed induction program for entry to the industry. Development of a unit of competence specifically to reflect the unique skills required to operate waste collection trucks beyond that of an HV licensed truck driver
	Explore and implement mechanisms for the provision of skills recognition services to encourage the engagement of the existing workforce in nationally recognised training arrangements Work with industry stakeholders to develop a training culture within the industry based on the attainment of nationally recognised qualifications	1-5 years	Skills recognition services are made available to the industry An employment frame work based on the attainment of nationally recognised qualifications is established

EUPA

PART 3 – PUBLIC ADMINISTRATION

Structure of Report for Public Administration

The Public Administration, Public Safety and Corrective Services Environmental Scans provide the foundation for this section of the Workforce Development Plan. The following section of the Workforce Development report provides individual 'Strategic Environment' summaries, followed by a common section as follows:

Individual Sections	Common to all
Public Sector Strategic Environment	Labour and Skill Needs
Public Safety Strategic Environment	Issues, Barriers and Opportunities
Corrective Services Strategic Environment	Strategies

Public Sector Workforce Planning

The Public Sector has made significant investment in workforce planning and development through the Public Sector Commission. For this reason, the reader is directed to the following key papers that form the basis of part of this plan:

Public Sector Commission Documents

- Strategic Directions for the Public Sector Workforce 2009-2014

- Forward Thinking – Workforce Challenges for the Public Sector

- Public Sector Workforce 2009
  Including a demographic profile, workforce projections to 2018 and a range of practical workforce solutions

- Western Australian Public Sector Workforce Report (March 2010)

EUPA

Public Sector Strategic Environment

The Western Australia State Government (Public Sector) is the largest employer in Western Australia and significantly contributes to the economic development of WA through direct employment of local people and provision of necessary support services that enable communities to function and grow. The Economic Audit Committee defines the role of the Public Service by its core function – to serve the public. It does this through:

- Supporting the Government in formulating and implementing policy

- Fostering service delivery capability, both within the public sector and indirectly in partnership with the community and private sectors

- Regulating private sector activity where doing so improves economic, social and environmental outcomes.

When considering the scope of this report, it is important to make a distinction between those who provide public administration duties compared to some specialist investigative, regulatory and custodial roles that employ people under a specific statutory authority (covered under Corrective Services and Public Safety)

Industry Characteristics

The sector is comprised of 180 departments, Senior Executive Services (SES) agencies, Non-SES agencies and Schedule 1 entities (Chart of Australian Government, 19 Feb 2010). 126 of these agencies, comprising of Departments, Statutory Authorities, Central Agencies and Prescribed Offices are required to report human resource data to the Public Sector Commission. Information presented within this Plan and the supporting Environmental Scan is derived from this data.

The sector has grown above the rate of population growth for the period June 1999 to June 2009 and has recently seen the introduction of new management tools. Figure 1 illustrates the composition of the sector as reported to the Commission (Public Sector Profile June 2009) and size as reported in March 2010 through HR MOIR data collection:
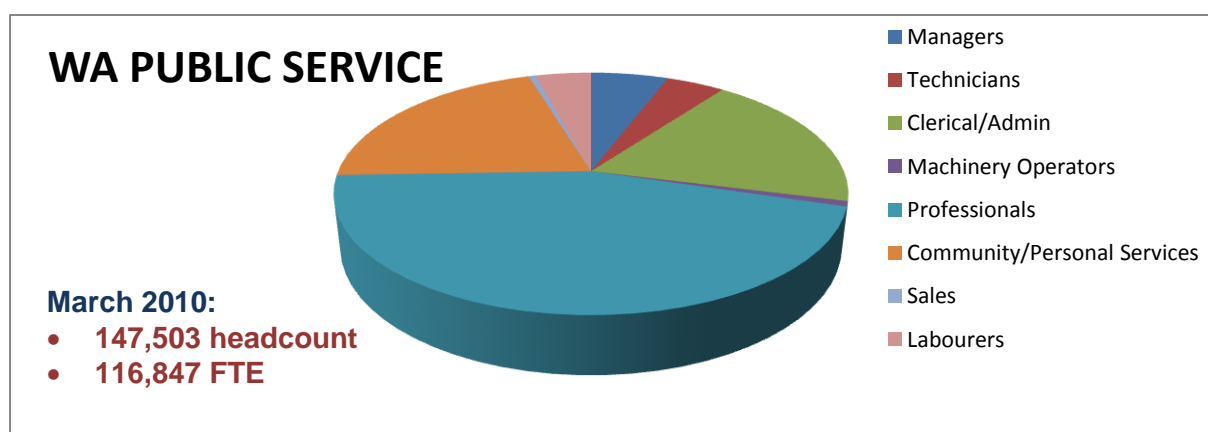

Figure 1 – Composition of the sector as reported to the Commission

The environmental scan provides the following key messages:

Salary and Geographic Locations

- 73% of all employees are based in the metropolitan area. Of those in the regions, the Gascoyne was the smallest employer and the South West was the largest.

- The median salary of public sector employees was $61,583 as at June 2009. Approximately 47% are earning between $30,000 and $60,000.

- The median salary is heavily influenced by the majority of workers in the metropolitan area. Of those in the regions, median salaries ranged from $51,331 (Wheatbelt) to $57,860 (shared by the Goldfields/Esperance, the Kimberley and the South West).

- Community and Personal Services workers represent the lowest paid – a sector that has higher representation in regional WA.

- Part Time Arrangements

- Only 54% of employees were engaged on a full-time basis, representing an industry that can offer flexibility.

- 44% of employees have been with their current agency for less than two years which includes new entrants to the public service and those who move between agencies.

Senior Executive Service (SES)

The SES is defined by Section 42(1) of the Public Sector Management Act 1994 (PSM Act) as follows:

a)   to provide for a group of executive officers who are capable of–

- furnishing high level policy advice and undertaking managerial responsibilities in agencies; and
- being deployed within agencies, and between agencies, so as best to promote the efficiency of the Public Sector; and

b)   to promote the efficiency of individual agencies."

- The Senior Executive Service is a segment of the Public Service comprising of 395 employees.
- The SES has seen a small reduction in size over the last ten years (397-395) compared to an increase in the overall size of the Public Service.
- Gender and Age Profile:
- The Public Sector is comprised of approximately 68% women and 32% men. Whilst women outnumber men in every age bracket except 65+, women occupied less permanent positions and had a lower salary profile than men.
- Women had gained a larger representation in the Senior Executive Service, moving from 67 to 98 employees in the 10 year period to 2009 whilst the SES actually reduced in size by 2.
- In relation to age, the most staggering of statistics informs the reader that approximately 20% of the workforce is over 55 years of age – over 26,000 employees.
- Further, the median age was 45 overall. The South West and the Great Southern regions have the highest median age of all regions, with a median age of 47 years of age.

EUPA

The Public Sector Commission

The Public Sector Commission (the Commission) is the peak agency with a whole-of-government responsibility. The Commission has carriage of a formal Public Sector Reform program that responds to the Economic Audit Committee and focuses in part on:

- Capacity Building and Development
- Contemporary Management Frameworks
- Autonomy and Flexibility in Decision Making
- Changes to Legislation

The Commission invests significant resources in the sector through its Capability and Development Division. The work conducted by the Division aligns closely with the activities that EUPA seeks to undertake and for this reason a strategic partnership has been developed.

The Commission's current activities that seek to address labour and skills needs include (but are not limited to) the following:

- Mobility and Flexibility including a focus on Senior Executive Services (SES)
- Capability frameworks for all levels of the public service including leaders.
- Women in Leadership Strategy
- Entry Level Employment Program
- School-Based Traineeships
- Business Traineeships (including Aboriginal people and people with disabilities)
- Graduate Development Programs
- Internship Program
- Workforce Planning

EUPA endeavors to explore the ability for Vocational Education and Training to provide a skilled and capable workforce that will contribute, support and build upon initiatives already in place or planned by the Commission and ultimately contribute to the Strategic Directions for the Public Sector Workforce. EUPA considers that key benefits of VET for this sector can be realised:

By ensuring the sector is able to implement public policy through *skilled policy managers/developers*

By strengthening the workforce through competency development so that is *accepting of cultural and legislative change*

Through training that provides confidence to employees, enabling accountable decisions to be made in a framework that *manages risk*.

By ensuring that training is founded upon core government skills and knowledge enabling *collaboration and mobility* across the sector.

Public Safety Strategic Environment

The issues raised above in the Public Service Industry Overview are equally relevant to this sector which is heavily dominated by public sector agencies. However, the previous overview relates only to the public service staff (administration) within organisations. The Public Safety Industry is also comprised of the following which are subject to this component of the environmental scan:

- Staff appointed under statutory authority to provide the core functions of the agency.

- Volunteers

- Of equal importance, some private sector businesses that provide training or core services to industry.

Public Safety is comprised of the following sectors:

- State Emergency Services
- Police
- Fire

- Emergency Management
- Marine Search and Rescue
- Defence

There are a number of agencies within Public Safety in Western Australia that employ individuals in a range of wide occupations. The following form the backbone of Public Safety in Western Australia:

- **Department of Environment and Conservation –** Responsible for administering the legislation concerning environmental regulation in Western Australia. Of particular interest to the public safety sector is the 'Environmental Enforcement Unit' and five branches grouped under 'Environmental Regulation'. The DEC reported a headcount of 2192 and FTE of 1867 (HR MOIR March 2010)

- **Fire and Emergency Services Authority –** Prevent, prepare for, respond to and recover from emergencies in partnership with the community and other agencies. FESA responds to a wide range of emergencies including hazardous substance, land/marine search and rescue, fire and natural or man-made disasters.

    To achieve this, FESA administers numerous volunteer services including Bush Fire Brigades, State Emergency Services (SES) and the Life Saving Association of WA. FESA employs approximately 1300 fulltime staff and 41 part time/casual staff. It is further supported by over 30,000 volunteers (2009 Annual Report).

- **WA Police -** Responsible for policing the largest single police jurisdiction in the world, an area covering 2.5 million square kilometres with a structure comprising three regions, 14 districts and 157 police stations. WA Police employ 8,332 (headcount) against an FTE of 7,450 (HR MOIR March 2010). The WA Police reported a total of 5,459 Police Officers including senior police and Aboriginal Police Liaison Officers and noted that 61% of all employees are metropolitan based (2009 Annual Report)

- The 2009 WA Police Annual Report shows that employees are predominately male at all levels. 20% of Serving officers, 10% of Senior Police and 29% of APLOs are female. Conversely, 61% of Police Staff are female, however nearly 60% of females are employed at levels 1 and 2.

- **Defence –** is a commonwealth agency of extreme complexity. The sector is comprised of approximately 50,000 permanent members of the Australian Defence Force, 41,000 Reserve members, 20,000 Public Service members and 24,000 Cadets.

  Whilst the defence sector is active in Western Australia, workforce planning and development is an issue considered to be outside of the scope of the work of this Training Council. However, the EUPA Training Council notes the benefits for the inclusion of this sector when consulting with industry and training providers due to the positive impact of collaborative development for all public safety agencies in Western Australia.

- **Surf Life Saving WA –** patrols the beaches of Western Australia through the assistance of approximately 16,000 volunteers and reported approximately $5.3 million in revenue for 2009 financial year (2009 Annual Report)

The Public Safety sector:

- places a heavy reliance on volunteer work and community engagement.

- will need to adjust and grow to cater for high population growth, particularly in regional areas;

- is impacted upon by climate change through a need to provide more resources for natural events/disasters including longer fire seasons and extreme weather events;

- sees community demands changing in relation to role and function; and

- must react to technology advancements, including a need to develop specific investigative and forensic methods and international co-operation.

EUPA considers that it is well positioned to assist the industry to implement workforce development strategies, but is cognisant that it will be unlikely to influence some aspects of workforce planning in an industry that works through national peak bodies. EUPA affirms its intention to facilitate a collaborative approach that builds on the strengths of individual agencies wherever possible.

The Private Sector 'Public Safety' Industry

The public safety industry contains a significant number of training providers who supply nationally recognised training from the PUA00 Public Safety Training Package. These RTOs provide competency development in the following areas:

- Workplace Emergency Response (WER)
- Search and Rescue (SAR)
- Driving
- Emergency Management
- Fire

EUPA has been unable to report a detailed analysis of this industry sector and seeks to work with training providers and those responsible for public safety within the private sector to further understand the application of public safety competencies within broader Western Australian industry.

Corrective Services Strategic Environment

The Corrective Services Industry covers services that protect the community through offender management. 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.

The sector is somewhat uniquely placed as it is able to utilise its own processes and resources to generate efficiency to the point of becoming partly self-sustaining. The economic benefits to the community are enormous when consideration is given to the contribution to operations made through the use of offenders as a labour source. Benefits to the WA community include work relating to environmental conservation, charities and manufacturing.

The sector also draws upon the Vocational Education and Training (VET) Sector to provide core services to those in custody. EUPA notes the impact of higher prisoner populations on the provision of VET programs that contribute to the sector's self sustainability and offender rehabilitation programs.

In Western Australia, the sector is comprised of the following three organisations:

- Department of Corrective Services. Employs 4505 people (headcount) against 4054 FTE (HR MOIR March 2010)

- Serco Asia Pacific – A private contracted organisation who manage the operations of the Acacia medium security prison. The contract for Acacia Prison is to be renegotiated in 2010. Employs 208 staff (consultation May 2010)

- G4S – A private contracted organisation that manages court security and custodial services. This contract was obtained through the acquisition of AIMS Corporation Operational Contracts in 2007. Employs approximately 300 staff across 21 locations state-wide. The current contract runs through to 2011.

As prisoner numbers are likely to increase and community/government expectations change, there will be a continuing demand for prison officers and those employed in prisoner support services.

Demographic Information

Demographic information is known for the State Government Department of Corrective Services only at this stage. EUPA is committed to establishing valuable working relationships with the private sector providers at the earliest opportunity.

Of note, the research highlights that the prison officer workforce is comprised of 78% and 68% males as prison officers and juvenile prison officers respectively. Employment of Aboriginal people is noted to be above the national average, however EUPA is aware of the immediate need for the Department of Corrective Services to plan for employment of Aboriginal workers to operate a new prison under construction in Derby Western Australia.

In relation to age, the sector also provides significant cause for alarm, with 32% of its workforce estimated to reach 55 by 2012.

Geographic locations are represented below (Source: Department of Corrective Services):
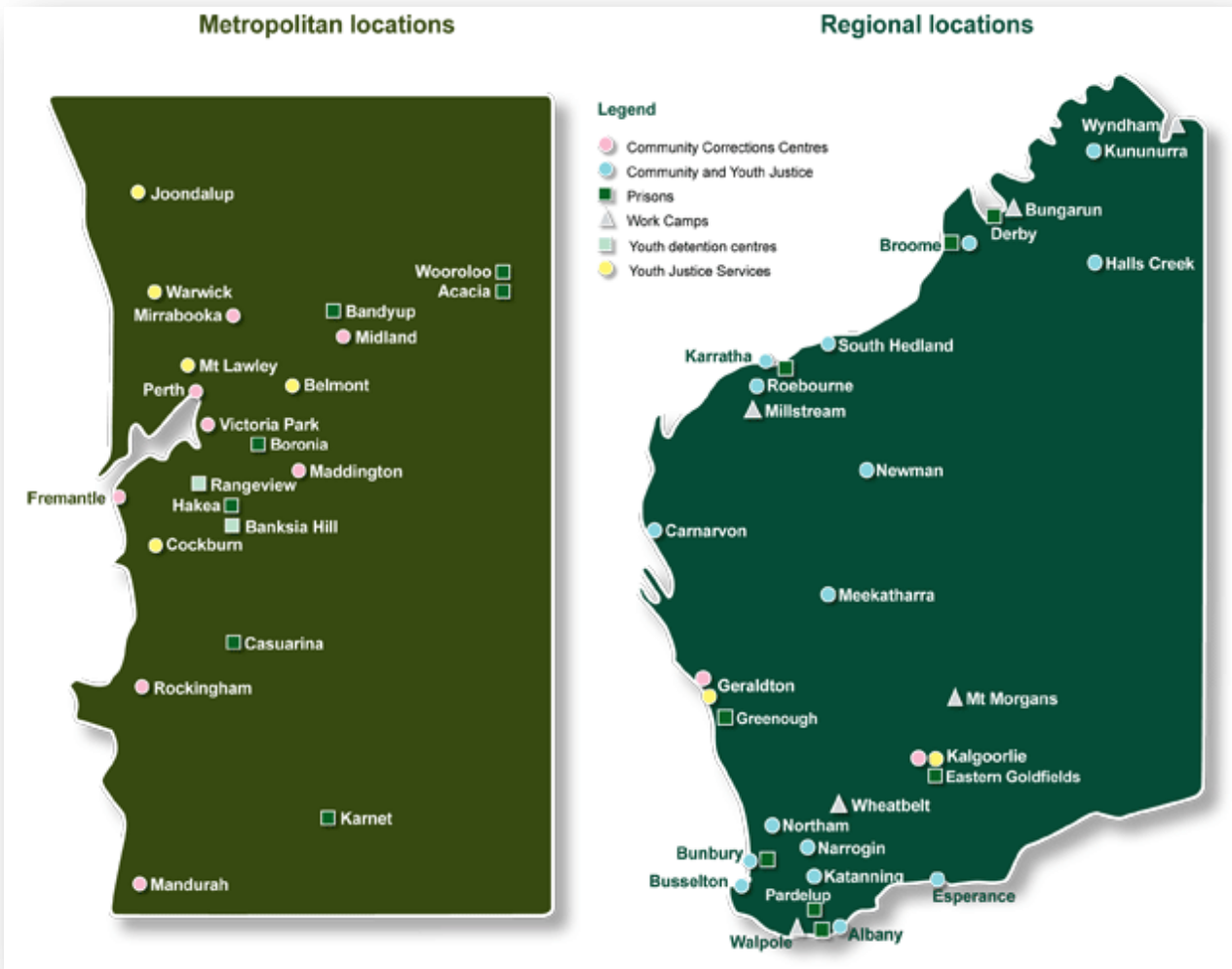

Figure 2 - Location of WA Prisons

The following sections of the Workforce Development Plan address the Public Administration Sector as a totality. This approach has been chosen as it reflects EUPA's scope of business, but it is not without its issues as it is recognised that each sector contains issues that are unique. The combination of sectors is in no way intended to devalue the needs, issues or actions for any industry but seeks to address them in a manner that will ultimately align to the business of the Training Council.

Public Administration Labour and Skill Needs

Skills Needs

EUPA notes the scrutiny placed on Public Administration industries through public inquiries, royal commissions, etc. EUPA submits that the provision of training is best accomplished through accountable training that provides industry-defined outcomes to participants. Provision of nationally recognised training that is exclusive to public administration and its specific occupational groups is a strategy that provides assurance to agencies, watchdogs and the public that training is aligned to such standards and auditable by external regulators.

Working in Government

Current skills development efforts often provide valuable and fundamental outcomes that improve the participant's work output, but fail to take into account the specific nature of working in government. The Public Administration Industry Working Group (PAIWG) recently discussed the loss if skills and knowledge that are fundamental to the mechanics of government – an issue that was being discussed in the context of human resource workers, but is applicable across many levels and facets of government.

For this reason, the Commission will lead efforts to implement government qualifications – i.e. those from the PSP04 Public Sector Training Package – in preference to generic equivalents such as those from the Business Services Training Package. The strategy is intended to improve the output of the government sector by recognising the unique requirements and inherent responsibilities when working inside a regulatory framework as well as operating across a unique and complex social, environmental and economic landscape. Ultimately this will assist to retain workers through the formal recognition of competencies – whether developed through formal learning or work/life experience.

PAIWG Priorities

The scope of activities for the PAIWG also identifies the focus for skill development through completion of PSP04 qualifications (from Certificate II to Advanced Diploma) across a number of generalist and specialist qualifications. Of the qualifications noted in the Environmental Scan, the following are highlighted as a priority:

- Certificate II to Certificate IV in Government
- Diploma and Advanced Diploma of Government
- Specialist qualifications for:
  - Management
  - Human Resource Management
  - Project Management
  - Policy Development
  - Regulatory including investigations

PAIWG members also discussed the need for change management and coaching/mentoring skills development at the June 2010 meeting.

Further evidence of skills development needs is provided through the application of the "State Capability Framework" under development by the Commission. The Framework identifies programs, and activities for agencies to access when considering the needs of employees in the Government sector across the different cohorts. Though the strategies are currently not aligned to nationally recognised training, there is a capacity to align activities either for direct enrolment in units or to provide evidence that can be utilised for recognition processes at a later point in time.

Skills specific to Public Safety

Whilst the focus of the environmental scan has been directed on the major stakeholders in Public Safety, the industry is clearly applicable to a large cross-section of other industries in Western Australia – as it defines the standards required for those who manage first response in preparation for the arrival of emergency services. Workplace Emergency Response is one particular collection of competencies for inclusion in any industry, reducing workplace risks and providing added assurance to senior executive that staff are trained and assessed to a nationally consistent standard.

Emergency management is also a function that has become widely applicable to agencies within government responsible for entire communities. The largest agencies within this sector are required to work in collaboration with each other and significant stakeholders such as Local Governments. Skills development in this area is often revisited through major exercises (simulations) involving multiple stakeholders. For this reason, Emergency Management and coordination is noted as a skills demand for the industry.

The affect of technology advancement is also noted as a catalyst for skills development that constantly impacts upon the sector. Whether skill needs arise through the addition of new equipment or systems that allow for more effective or efficient operations; or through a need to find new ways of combating threats to public safety enabled by technology; the sector is required to move its staff into new paradigms in the quickest and most credible manner possible.

The WA Police is preparing for the Commonwealth Heads of Government Meeting (CHOGM) scheduled for late 2011. This event will require an enormous training effort to recruit additional staff and up skill existing members to deal with such a large event.

FESA's main concern is the attraction of volunteers – a sector that is declining in number with the possibility of significantly affecting operations. Should the effort to recruit volunteers succeed, this will place a training demand on the Academy to provide core public safety skills.

Skills development needs also relate to the general requirement to grow staff numbers for planned infrastructure projects. The Corrective Services industry requires pre-employment training as well as direct vocational training to staff to prepare for a prison being constructed in Derby.

Table 8 – Public Administration Occupations in Demand by ANZSCO

ANZSCO	Public Sector Occupations	State Priority Occupations List (Ranking)
132211	Finance Manager	NOT ON LIST
132311	Human Resource Manager	NOT ON LIST
132411	Policy and Planning Manager	NOT ON LIST
135199	ICT Manager nec	TOP
221111	Accountant (general)	TOP
223111	Human Resource Advisor	PRIORITY
223311	Training and Development Professional	NOT ON LIST
511111	Contract, Program and Project Administrator	TOP
512111	Office Manager	PRIORITY
531111	General Clerk	PRIORITY
551111	Accounts Clerk	NOT ON LIST
551311	Payroll Clerk	NOT ON LIST
591113	Purchasing Officer	PRIORITY
599411	Human Resources Clerk	PRIORITY
599599	Inspectors and Regulatory Officers nec	NOT ON LIST
	Public Safety Occupations	
1391	**Commissioned Officers** (Management)	PRIORITY
223311	**Training & Development Officer**	NOT ON LIST
441211	**Fire and Emergency Workers** Including Career and Volunteer workers	PRIORITY
441312	**Police Officer** Including Uniformed Police, specialist forensic and investigators and Auxiliary Officers	TOP
599599	**Inspectors and Regulatory Officers**	NOT ON LIST
	Corrective Services Occupations	
139999	**Other Specialist Managers** Including Snr Management and Facility Managers	NOT ON LIST
223311	**Training & Development Officer**.	NOT ON LIST
2422	**Vocational Education and Training Teacher (Aus)**	
253411	**Psychiatrist**	NOT ON LIST
2723	**Psychologists**	NOT ON LIST
272511	**Social Workers**	TOP
442111	**Prison Officer** Including Senior Prison Officers; Adult and Youth Corrections Officers	TOP

EUPA

Issues, Barriers and Opportunities

Labour Market and Supply

Issues:

- Western Australia has recorded the highest population growth in Western Australia. By 2056, the population of WA has been predicted to be 4.3 million.

- Regional growth and higher density living will demand higher levels of service provision.

- Increases to the levels of prison populations are already being met with new infrastructure and higher staffing needs

- Higher numbers of immigrants from CaLD backgrounds require better community representation within agencies and better community engagement.

- An ageing population requires increased provision of services specific to this cohort.

- Climate change and technology advancement will require additional community services to be provided requiring new skills sets and labour needs.

- Migration continues to be a key strategy to meet current and future labour demand.

Barriers:

- With the significant shift in community demographics, there are less youth in the labour market to draw from and a higher number of retirees that need to be attracted back into the workforce.

- Employment of CaLD workers may require pre-employment training interventions

- Employment within regions may be difficult given competition with the private sector (e.g. resource sector opportunities)

- Housing availability (private and Government assisted) may be a barrier for workers considering relocating to some regional areas.

- Skilled labour availability is decreasing due to market competition and future issues relating to the ageing population.

Opportunities:

- Public Safety and Public Administration industries are capable of utilising under-employed community sectors – ultimately contributing to better community representation at agency level.

- Skilled migration offers opportunities to source labour.

- The Public Sector Commission actively seeks to attract and retain valuable staff through dedicated investment in frameworks, programs and initiatives.

- Training of unskilled labour remains a viable solution, particularly where government funding of VET is opened to government agencies industry.

Workforce Participation

Issues:

- The Public Sector Commission is nearing completion of a 'Diversity Planning' project.

- The population is ageing and becoming highly multi-cultural.

- The Aboriginal population is growing at a faster rate than non-Aboriginal nationally and is reducing in average age – not getting older.

- The sectors will need to provide higher levels of service to the community across Western Australia (including regional areas).

Barriers:

- Some occupations within the Public Safety Industry have historically been male dominated.

- Women are represented at lower employment levels and have a lower wage profile than males in the Public Administration industry.

- Women are under-represented at management levels.

- Reduced occupational roles available within the public safety industry (civilianization) impacts upon later career movement for mature age workers.

- Volunteer numbers are reportedly dropping in public safety.

- The use of the skilled migration strategy through issuance of temporary visas may lead to a future loss of corporate knowledge.

Opportunities:

- Barriers for employment of under-utilised sectors are seen as opportunities for competitive advantage by the Commission through its work in diversity planning.

- Retention of those considering retirement will assist in lessening the loss of corporate knowledge and providing additional mentoring support for new entrants.

- Aboriginal participation in the workforce is a sustainable benefit and is supported by a commitment to achieve COAG outcomes..

- Employment of under-utilised sectors will provide better community representation.

- Alternative employment arrangements such part time, work from home and transition to retirement are current strategies which can be further analysed for increased workforce participation.

- Further analysis of female-friendly workplaces and career development frameworks/initiatives can assist to broaden participation of this sector.

Planning and Coordination
Issues

- Strategic Directions for the Public Sector provides a foundation for workforce planning and development activity.

- The Public Sector Commission has carriage of workforce development components of the Public Sector Reform program.

- The sector will need to provide higher levels of service to the community across Western Australia.

- Individual agencies are investing in workforce planning/development.

EUPA

- Policy and workforce planning can be affected by political instability (e.g. during election periods).

- Changing government, community and employee expectations about the role and function of public administration and public safety need to be incorporated into workforce planning.

- Regional requirements need to be addressed specifically in workforce planning.

- Branding for government is limited.

Barriers:

- Planning and coordination must address immediate as well as future labour shortages.

- Shortages in critical occupations such as para-professionals and professionals will be difficult to address given private sector competition.

- Policy and workforce planning can be affected by political instability (e.g. during election periods).

- The mobility of staff within the sector causes a great deal of effort to backfill positions internally (with a continuous knock-on effect). The effort to manage internal vacancies may be detracting from efforts to source external labour.

Opportunities

- EUPA can achieve greater results through its partnership with the Public Sector Commission.

- EUPA can work with individual agencies, businesses and training providers to assist and inform workforce planning at strategic levels.

- Private sector public safety (including corrective services) stakeholders must be engaged in workforce planning.

- EUPA must ensure the development needs of its industries remain on the radar of peak industry bodies and government.

Attraction and Retention
Issues:

- The sectors will need to provide higher levels of service to the community across Western Australia.

- The public safety sector relies heavily on volunteers providing another way to become involved in community and lifestyle activities.

- The Public Sector Commission has worked to up skill employees to use flexibilities inherent to some government policy (e.g. Recruitment).

- COAG can significantly affect the operations of Public Administration and Public Safety industry stakeholders.

- Changing demands of workers occur through new public, government and employee expectations;

- The sector has seen recent sustained activity to ensure efficiency, quality of service and value for money.

- Increased mobility will assist to attract and retain staff.

Barriers:

- Other industry sectors are able to offer higher wage incentives.

- There are some perceptions in the community that government agencies are risk-averse and process driven.

- The industry is constrained when considering rewards for high performing staff.

- Changing demands of workers through new public, government and employee expectations;

- There are new attitudes to work by younger generations (multiple careers, multiple employers) that are a barrier to retention.

- The workforce population is ageing.

- Volunteer numbers are reportedly dropping in public safety.

- Issues such as housing and social infrastructure will need to be considered to attract and retain staff, particularly in regional areas.

Opportunities:

- Promotion of the industry across the community will need to highlight the breadth of work, stability and flexible employment conditions available – particularly known within public sector agencies.

- Lifestyle choices are also a consideration that includes the two private organisations that operate in the corrective services industry.

- Lifestyle choices include working in regional Western Australia, with added potential benefits of Government assisted housing where available.

- Mobility within the sector is also a major drawcard that should entice workers.

- The industries provide a range of employment opportunities in customer service, technical, para-professional and professional roles

- The Works Reform: Business Solution Plan June 2009 will result in more agencies being located outside of the Perth CBD through changed accommodation planning.

Training & Productivity
Issues:

- The PAIWG has established a clear scope of work as follows:
  - To raise the profile of the Public Safety Training Package
  - Increase the number of WA based RTOs scoped to deliver the PSP04
  - Advise agencies in relation to state and federal funding
  - Provide strategic input on Aboriginal employment and training
  - Provide strategic input on new entrant training issues

- The Public Sector and Public Safety industries are subject to high public scrutiny that includes training.

- There is a focus on efficiency and rationalisation of legislation.

- Technology advancement provides constant skilling needs for industry.

EUPA

- Shared Services arrangements are changing the skills required of managers and staff.

- The Public Sector needs to build policy development and delivery capacity.

- The major stakeholders of the Public Safety Industry (WA Police, FESA, DEC & Corrective Services) are enterprise RTOs.

- Climate change will affect skill requirements and productivity.

- The 2010 State Government Budgets has promised additional public safety staff that will require entry-level training.

- The 2010 State Government Budget affects training budgets in relation to:

  o A requirement to partially fund pay increases for workers through internal agency budgets

  o A downsizing of some public sector agency workforces (Agriculture and Tourism)

Barriers:

- Public Administration and Public Safety are relatively new sectors for EUPA to engage with.

- Public Safety and Public Administration industries are often a ready source for trained staff resulting in retention difficulties.

- The lack of availability of public funding for government qualifications and government agencies

- There is a lack of RTOs scoped to deliver PSP04 qualifications that will meet the current and future demands of the industry.

- Utilisation of a traineeship in business for public administration staff does not provide the maximum benefit to the sector in relation to retention strategies.

- The values and skills specific to working in the public sector are not explicit in the current Business (BSB07) qualification delivery.

- Industry stakeholders are operating with reduced budgets that impact on training delivery.

- Research indicates that professional development opportunities may not be made available at the same rates to lower level government workers when compared to higher levels.

Opportunities:

- Current initiatives developed by the Commission focus largely on Higher Education or unaccredited training. There is significant opportunity to grow the delivery of VET.

- Explore better utilisation of existing declared traineeships, establishment of new traineeships or alternative methods of sourcing public funding.

- EUPA can increase the uptake of the PUA00 for post entry-level training.

- EUPA can assist to increase the uptake of PSP04 for entry-level and existing workers.

- Explore public funding for government agencies and for government qualifications.

- EUPA can work with the Department of Corrective Services to develop pre-employment strategies for the local workforce in preparedness for the opening of a new prison in Derby.

- EUPA can build its relationships with private sector Public Safety stakeholders.

- Explore the further use of technology to increase the capability for training providers to service industry needs and commitment to professional development by industry.

- Training in innovation, accountability, risk and leadership will promote a workforce that operates better within a regulatory framework.

EUPA

Action Plan/Priority Actions

Existing Strategies

EUPA is cognisant that efforts made by itself and by individual stakeholders are informed by and supportive of existing state and national frameworks and strategies.

The following existing strategies apply to EUPA's industries:

Public Sector:

- Strategic Directions for the Public Sector Workforce 2009-2014
- Forward Thinking – Workforce Challenges for the Public Sector
- State Capability Frameworks

WA Police:

- Frontline First
- Our People Strategy
- Women in Leadership Strategy
- Capability Frameworks

Corrective Services:

- The Workforce Strategic Framework 2009-2011

Training and Productivity

Labour Market and Supply

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Influence the National and State lists focusing on the State Priority Occupations List and PPP list	6-12 months	Utilise environmental scan to reference against DTWD PPP/State Priority Occupation List. Report produced and adopted by the IWG.	Public Admin Public Safety Corrective Services
		1-3 years	Critical needs reflected within the State Priority Occupation List	
		3-5 years	Monitor and advise DTWD of changes to skilled occupation requirements	
2	Assist departments, associations and peak bodies to promote employment opportunities and career pathways	6-12 months	Existing and new professional development pathways/ models are communicated to peak bodies. Work with Workforce Development Centres to promote careers	Public Admin Public Safety Corrective Services
		1-3 years	Promote and facilitate collaborative promotional opportunities for associations and organisations within the resources available to EUPA. Work with all Public Sector agencies, including Schedule 1 agencies to provide strategic advice in line with Public Sector Commission outcomes. Evaluate effectiveness of EUPA activities to inform future activity	(Government agencies outside Commission's scope)
		3-5 years	Refine EUPA activities in accordance with evaluation. Evidence of reporting to DTWD regarding requirements of industries	

EUPA

3	Build upon established relationships with state Regional Development Commissions	1-3 years	Evidence of regional issues reported to IWGs	Public Admin Public Safety Corrective Services
4	Determine labour market and supply issues/concerns that impact upon the private sector	6-12 months	Relationships with private corrective services organisations established	Corrective Services
		1-3 years	Analyse and report on training supply and labour needs specific to the private sector organisations.	

Workforce Participation

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Assist agencies to identify and implement employment engagement strategies for youth, minority sectors, women and mature age (including retirees)	6-12 months	Individual agency/organisational needs identified with stakeholders and reported through IWG/Board.	Public Admin Public Safety Corrective Services
		1-3 years	EUPA activities and strategies show alignment to the State Capability Frameworks and the Indigenous Employment and Career Strategy EUPA activities are informed by and aligned to reports provided by Office of Equal Employment Opportunity	
		3-5 years	Evidence of successful contribution to the Public Sector Commission Indigenous Employment and Career Strategy Assist agencies to identify VET options to improve employment and career outcomes in accordance with strategic and business plans	
2	Research workforce development strategies for sectors that are male dominated	6-12 months	Meetings held with organisational workforce planning staff	Corrective Services
		1-3 years	Evidence-based recommendations provided to IWG	
	Determine workforce participation issues/concerns that affect the private industry.	6-12 months	Relationships with private corrective services stakeholders established	Corrective Services

EUPA

Planning and Coordination

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Provide timely information about DTWD initiatives and actions to Industry Working Group Members	6-12 months	Strategies for communication agreed and implemented EUPA website and online communication reviewed and revised where appropriate	Public Admin Public Safety Public Sector
		1-3 year	Positive Feedback from IWGs regarding information and communication with EUPA EUPA strategies improved where necessary	
2	Plan industry consultation and engagement activities with the Public Sector Commission	6-12 months	Documented inclusion of EUPA within PSC strategies Conduct activities/business from within the PSC on a regular basis PAIWG informed of agency-level consultation and any actions completed	Public Admin
		1-3 years	Demonstrate progression and completion of key strategies as identified by the PSC	
3	Consult with individual agencies to identify specific issues and trends	6-12 months	Schedule of meetings developed Action items documented, completed and reported to the Commission or executive management Agency workforce planning staff supported and networks established	Public Admin Public Safety Corrective Services
		1-3 years	Revise issues and trends in accordance with environmental scanning Agency workforce planning staff supported and networks established	
		3-5 years	Agency workforce planning staff supported and networks established	
4	Assist agencies to develop/refine specific data gathering strategies where current information is not available or unreliable	6-12 months	Peak bodies and lead agencies/ authorities utilised to gather workforce data	Public Safety Corrective Services

EUPA

#	Strategy	Timeframe	Measure	Sector
		1-3 years	Workforce data documented and communicated to IWG and DTWD where relevant	
			Strategies for future workforce planning influenced by new data	
		3-5 years	Strategies for future workforce planning influenced by new data	
5	Encourage departments/agencies and associations to invest in workforce planning	6-12 months	Workforce development plans developed or incorporated into annual business plans at individual agency/department levels	Public Admin Public Safety Corrective Services
		1-3 years	Publicly funded training is utilised where appropriate	
			Evidence of appropriate/improving training budget for employees within agency annual business plans across a number of years	
6	Establish a database of all industry stakeholders	6-12 months	RTO Forums utilised to generate new contacts	Public Admin Public Safety Corrective Services
		1-3 years	Database maintained to ensure currency	
7	Develop planning and coordination strategies that complement private industry concerns	6-12 months	Establish relationships with private corrective services stakeholders	Corrective Services Public Safety
		1-3 years	Evidence of participation of private sector stakeholders in EUPA activities	
			EUPA Workforce Development Plan amended to reflect industry strengths and concerns	

EUPA

Attraction and Retention

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Promote the uptake of existing declared traineeships	6-12 months	RTOs are scoped to deliver traineeships Research conducted into capacity for traineeship management within organisations/agencies/associations	Public Admin Public Safety Corrective Services
		1-3 years	Identify and promote champion agencies and authorities to IWG members Associations support and promote traineeships to members	
		3-5 years	Increase uptake by minority groups and underutilised sectors Agencies adopt traineeships as entry pathways	
2	Establish new traineeships to support attraction and retention strategies	6-12 months	Reports provided to IWGs on new traineeships/cadetships and supported by industry Minority and underutilised sectors considered for establishment of specific traineeships.	Public Admin Public Safety
		1-3 years	New traineeships/cadetships approved by the STB	
3	Work with central and individual agencies to investigate micro-level attraction retention strategies	1-3 years	Evidence of meetings held Strategies piloted at agency level	Public Admin Public Safety
4	Support Public Sector Reform process through collaboration with Public Sector Commission	1-3 years	Evidence of EUPA consultation in relation to whole-of-government strategies	Public Admin
5	Provide support to private sector stakeholders to attract and retain staff	6-12 months	Establish relationships with private corrective services stakeholders	Corrective Services

EUPA

Training and Productivity

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS	SECTOR
1	Encourage RTOs to scope Training Package qualifications by increasing the demand for training in industry	6-12 months	Work with the DTWD to create policy change allowing public funding for government qualifications Work with agencies/departments to explore alternative funding and support arrangements Build upon the existing relationship with Government Skills Australia	Public Admin
		1-3 years	Public Administration Agencies adopt PSP04 Training Package for industry-specific skills development where appropriate	
		3-5 years	Evaluate uptake of training in PSP04 Training Package Industry demand has driven training supply	
2	Support RTOs to access delivery resources	6-12 months	Publicly available material for each sector is collated and made available to RTOs where appropriate EUPA instigates and/or supports meetings between stakeholders to design and develop material	Public Admin Public Safety Corrective Services
		1-3 years	Resources developed/shared collaboratively across sectors where applicable Technology in training delivery is showcased to encourage greater uptake and regional delivery	Public Admin Public Safety Corrective Services
		3-5 years	Agencies participated in funded projects to develop delivery resources	Public Admin Public Safety

EUPA

					Corrective Services
3	Innovative delivery is shared to promote uptake of training (metropolitan and regional)	6-12 months	Leading innovators in training delivery identified Commercial providers of ICT researched		Public Admin Public Safety Corrective Services
		1-3 years	ICT developments are researched in relation to training provision		
		3-5 years	Innovative delivery methods are promoted/showcased with industry stakeholders		
4	Provide support to FESA if required to assist with the organisational change at the Academy	1-3 years	Documented evidence of advice and support provided upon request of FESA Facilitation of collaboration across Government Agencies to encourage sharing		Public Safety
5	Evaluate impact of private sector RTOs delivering Public Safety (PUA00) qualifications and units of competency	6-12 months	Meeting outcomes documented and actioned.		Public Safety
		1-3 years	Analysis of total training supply, RTO client base and effect on the Public Safety Industry Workforce Development Plan amended to include new information and strategies. Public Safety Training promoted to industry outside of EUPAs scope		
6	Promote VET solutions, in particular the PUA00 Training Package in relation to accountability, portability and risk-reduction.	3-5 years	Meeting outcomes documented and actioned Greater uptake of PUA00 qualifications in specialised occupations		Public Safety

Local Government Strategic Environment

Local Government provides important governance, development initiatives and social and economic progress to all Western Australian communities. There are 139 local government authorities functioning throughout Western Australia. Put simply, communities do not function without this tier of government.

Local Governments have a requirement to attract and retain a diverse workforce from blue-collar labourer positions to executive levels. Responsibilities range from:

- **Infrastructure:**
  Waste management, local roads and bridges
- **Recreation:**
  Parks, stadiums, swimming pools, community centres, caravan and camping grounds
- **Facility Management:**
- Ports & marinas, cemeteries, parking (including enforcement), libraries and museums,
- **Environmental Management**
  Natural resource management and climate change

- **Health:**
  Regulatory inspection, monitoring and enforcement, immunisation and animal control
- **Building Services:**
  Planning, inspections, licensing and certification
- **Planning ***
  Land use, development, building
- **Community & Economic Development**
  Social infrastructure, community assets
- **Corporate Management Services**

* **Note:** Building and planning is sometimes performed as a combined function, particularly relevant in smaller/regional local governments.

The Department of Local Government is the responsible government agency that oversees the sector. All Local Governments are currently members of the Western Australia Local Government Association (WALGA). Many senior staff within local government authorities are also members of the Local Government Manager's Association (LGMA). Councils are also able to collaborate through formal but voluntary Regional Organisations of Councils (ROCs) to achieve shared objectives. In WA, these are known as Regional Local Governments or Voluntary Organisations of Councils.

Due to the breadth of occupations in this sector, other associations that are integral to the Local Government include:

- Australia Centre of Excellence for Local Government
- Australian Institute of Building Surveyors
- Australian Institute of Environment Health
- Australian Library and Information Association
- Australian Local Government Association (Parent of WALGA)
- Australian Local Government Women's Association and WA Branch
- Environmental Health Australia
- Institute of Public Works Engineering Australia
- Local Government Community Services Association of Australia
- Local Government Finance Professionals

- Local Government Human Resource Managers
- Local Government Librarians Association of WA
- Local Government Planners Association
- Local Government Records Management Group
- Local Government Supervisors Association of WA
- Local Health Authorities Analytical Committee
- Parks and Leisure Australia
- Planning Institute of Australia
- Sister Cities Australia
- The WA Rates Officers' Association
- WA Rangers Association

EUPA

In Western Australian there are approximately 1350 elected members.. According to figures reported by WALGA in the 2010-2011 Executive Summary of Local Government Reform the sector employs approximately 11,000 West Australians in total. This is estimated to be 1.8 percent of the general population working in Local Government in Western Australia.

Investment in the sector totals approximately $2.5 billion per year. Local Government Authorities add significant net value to WA capital and in 2007-08 invested nearly $1 billion in capital projects.

Key statistics for the period 2007-08 (latest available figures) are:

- Total Operating Revenue: $2.7 billion
- Grants as % of operating revenue: 15.43%
- Rates as % of operating revenue: 40.30%
- Employees: 13,622
- Smallest LG by area: Peppermint Grove - 1.5sq km
- Smallest LG by employee: Shire of Murchison - 9 employees
- Largest LG by area: East Pilbara - 371,696sq km
- Largest LG by employee: City of Wanneroo – 828 employees

(Source: Local Government Directory 2010)

Local Government Authorities in regional areas have also benefited from the Royalties for Regions Scheme

Workforce Development Effort and Future Trends

The sector has seen significant effort made in workforce planning through the National Local Government Skills Shortage Steering Committee which published "New Ways of Thinking - Doing Business Differently" in May 2007. The publication provides a valuable insight into workforce planning and development strategies at a national level and forms a solid platform for continued efforts in Western Australia.

Future key initiatives for this sector include attraction and election of females to CEO roles, Local Government Reform (a State initiative), establishment of a training culture and improvement of training supply through increased provision of LGA04 Training Package qualifications by training providers.

Labour and Skill Needs

The Local Government sector cannot be treated singularly when discussing sustainability. Two levels of concern or opportunity exist within the sector:

> **Operators, Labourers and Trade Level:** With the inevitability of another skills/labour shortage, the sector must address its recruitment and retention strategies for labourers and tradespeople.

> **Administrative and Management:** The white collar segment also battles to offer remuneration in line with private industry. In particular, skilled roles such as planners, engineers, finance and environmental officers are roles that will be difficult to fill through current attraction and retention strategies.

The sector also moves into emerging roles including increased collaboration and cooperation with other government agencies – particularly as a result of climate change. In this regard, local governments are working closely with emergency service providers to provide coordinated emergency management during natural and man-made disasters. As governments and utility providers also explore climate change issues, local governments must also address planning issues.

In 2008 the Local Government Industry Reference Group undertook a Skills Shortage Survey of the sector. The survey generated a very high response rate from local government authorities (80%) and identified earthmoving plant operators, environmental health officers, accountants, urban and regional planners and building inspectors as the most prevalent skills shortages in the sector.

The National Local Government Skills Forum Report also indicates that skills shortage exists in the areas of Engineering, Planning, Environmental Health (Officers), Accountants and Trades (especially electrical). There is also a national shortage of Earthmoving Plant operators (Bulldozer drivers).

The summarised information of the National Local Government Skills Forum is available online at http://www.lgma.org.au

Skills shortage areas have been determined from documented evidence from media statements, IWG members, national and state associations, organisations and Government Departments

Table 9 – Local Govt Occupations in Demand by ANZSCO

| ANZSCO	Occupation	State Priority Occupation List Status
132211	Finance Manager	NOT ON LIST
132311	Human Resource Manager	NOT ON LIST
132411	Policy and Planning Manager	NOT ON LIST
135199	ICT Managers	NOT ON LIST
139912	Environmental Manager	NOT ON LIST
139999	Specialist Manager nec Asset Manager	NOT ON LIST
221111	Accountants	Top
223111	Human Resource Advisor (Professional)	Priority

EUPA

ANZSCO	Occupation	State Priority Occupation List Status
223311	Training and Development Professionals	NOT ON LIST
224214	Records Manager	NOT ON LIST
224611	Librarian	NOT ON LIST
232212	Surveyor	Top
232611	Urban and Regional Planners	Top
233211	Civil Engineer	Top
234399	Environmental Scientist	NOT ON LIST
251311	Environmental Health Professionals	Top
272612	Recreation Officer (Recreation Officer)	NOT ON LIST
312113	Building Inspector	NOT ON LIST
312116	Surveying or cartographic Technician	Top
312211	Civil Engineering Draftsperson	Top
313112	ICT Support Technicians	Priority
341111	Electricians	Top
362213	Gardeners (Horticulturalists/Parks & Gardens)	High
411711	Welfare Support Worker (Youth Worker, Community Worker)	Top
421111	Child Carer Worker	High
423111	Aged Carer	High
442217	Security Officer	High
431999	Hospitality Worker nec (Caterer)	NOT ON LIST
521111	Personal Assistants	Priority
531111	General Clerks	Priority
551111	Accounts Clerk	NOT ON LIST
551311	Payroll Clerks	NOT ON LIST
561311	Filing or Registry Clerk	NOT ON LIST
561611	Switchboard Operators	NOT ON LIST
599599	Inspectors and Regulatory Officers	NOT ON LIST
599999	Rates Officer	Priority
7212	Earthmoving Plant Operators	High
7219	Other Mobile Plant Operators	Priority

EUPA

Issues, Barriers and Opportunities

Labour Market and Supply

Issues:

- Increased activity in the resources sector will negatively impact on the availability of skilled and unskilled workers.

- An ageing population will require local governments to devote services to this community sector creating a demand for additional labour and/or skills development

- Growth in the resources sector will fuel regional growth demanding more services from local governments

- An ageing population will provide opportunities for local government to source labour from those considering or post retirement.
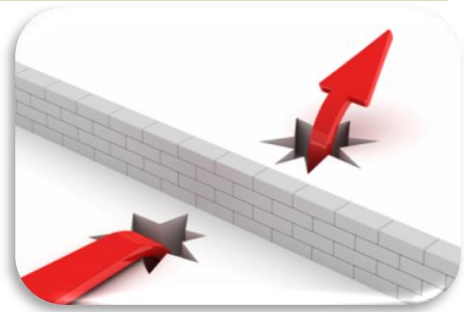
Barriers:

- Regional growth and the return to positive conditions for the resource sector will place added strain on a tight labour market.

- Government and peak industry bodies such as the Chamber of Commerce and Industry have largely focused on meeting the labour demands of the resource sector in recent times.

Opportunities:

- EUPA will work with local government agencies to develop and support innovative strategies that ensure labour demand issues for the sector remain firmly in the centre of the government's radar.

- Promotion of the sector amongst various community demographic groups will need to highlight the breadth of work, lifestyle opportunities, stability and flexible employment conditions available.

- EUPA must seek to utilise school based career advisors, Workforce Development Centres, the Aboriginal Workforce Development Centre and individual agencies to raise the profile of the sector amongst potential job seekers.

- Skilled migration may provide short term solutions to skills/labour needs.

Workforce Participation

Issues:

- The sector aims to ensure that it is comprised of a diverse workforce that is representative of the community it serves.

- The diversity of this sector requires labour from a cross section of industries.

- 2010 has been nominated as the 'Year of Women in Local Government'.

- There is also a focus on increasing the participation rate of Aboriginal employees.

- Local Government has made significant inroads to enable workplace initiatives to be implemented that effectively increase the ability for minority and under-utilised community sectors to engage in employment.

EUPA

- An ageing population will provide opportunities for local government to source labour from those considering or post retirement.

- Regional growth will also place a large demand on the sector – not only in relation to employing staff directly but to provide services to the growing communities.

- IT has enabled flexible working arrangements and aided training providers to provide skills development in a manner that may assist to attract and retain staff.

Barriers:

- Competition for labour, particularly in regional areas.

Opportunities:

- Existing strategies such as the focus on attracting women into management/CEO positions provide a foundation to continue work in this area

- The Aboriginal population is an under utilised community sector that is located across WA.

- The gaining population provides opportunities to engage with retirees.

- Advancements in relation to Information Technology have increased the sector to offer flexible working arrangements (e.g. work from home).

- Local Government is not limited by the scope of work available which is seen to be a highly positive attribute for the industry.

Planning and Coordination

Issues:

- WA State Government commitment to Local Government Reform will involve measures to increase efficiency and add value to the services provided.

- The reform program will likely provide region-specific demands to address issues across a wide variety of occupational roles.

- State Government will work collaboratively across the public sector and local government to provide closer community engagement in strategic planning (EAC Recommendation)

- The sector benefits from a range of associations acting on behalf of their members ranging from those specific to the local government sector (e.g. WALGA and the LGMA) to professional bodies that take an interest in local government as an employer of their profession (e.g. IPWEA, PIA).

- The sector seeks a more collaborative approach to workforce development through an alignment of stakeholder goals and actions.

- A number of local governments have also formed Regional Organisations of Councils (ROCs) that further strengthen the ability of individual authorities to benefit from shared resources, staff, activities and collective effort.

- Collaboration with the mining sector may provide workforce development solutions.

- The size, diversity and geographic distribution requires a better approach to knowledge management (including consistency of knowledge)

- Local governments may redefine their scope of work to ensure sustainability creating training demand.

- Strategic Workforce Planning skills are required by LGs.

- The increasing use of 'project-specific funding' reduces the capacity of a local government to self-manage its funds, potentially impacting upon its ability to provide professional development to existing staff or allocate funds toward attraction strategies.

- Despite the overall size of the sector, local governments vary considerably in their own size and that of the population they govern. Workforce planning and development must account for individual regional needs and cannot rely on one-size-fits-all answers.

- The growth in population will increase demands on local governments to provide community services – particularly in aged care/recreation.

- RTO efforts to enter the Local Government Sector have been hampered as there has been no easy way to address whole-of-government training issues in an efficient manner.

Barriers:

- Local governments differ substantially in size, operations and scope of work.

- Many authorities appear to be 'going it alone' when it comes to professional development, employment and workforce development strategies. Whilst in line with the autonomy which is statutorily afforded to them, this adds a level of inefficiency to the sector.

- RTOs/GTOs have complained that there is no single point of contact to discuss training demands within individual local governments.

Opportunities:

- Local governments, public sector agencies and associations seek to adopt a relationship-based approach to workforce development.

- A sustainable structural framework for development be adopted.

- Collaboration with the mining sector in relation to regional development and training.

Attraction and Retention

Issues:

- Local Governments employ staff in a large and diverse array of occupations broadly grouped into elected members, indoor and outdoor workers.

- Geographic distribution of local governments provide unique challenges at community level.

- IT has enabled flexible working arrangements and aided training providers to provide skills development in a manner that may assist to attract and retain staff.

- Growth in the resources sector will negatively impact on the availability of skilled and unskilled workers in the labour market, creating attraction and retention issues for the Local Government Sector.

- The diversity of this sector requires labour from a cross section of industries.

- Attraction and retention of workers is impacted upon by the resources sector and the global employment marketplace.

- The sector will need to ensure employment conditions are attractive and as flexible as possible, building an image/profile as an employer of choice and encouraging a focus on work/life balance.

EUPA

- An ageing workforce places additional demands on the sector to retain these workers and/or attract new labour to replace those retiring.

- Recognising the skills of existing workers who do not hold formal qualifications could provide a mechanism to show employee value and therefore retain workers.

Barriers:

- The sector is constrained by a lack of opportunity to offer rewards to high performing staff due to tight fiscal policy that governs the expenditure of public money.

- In a new employment market where life-long careers are seldom and rewards are often required to be immediate, the sector is simply not able to compete with the resource sector and will therefore lose many of its administration workers, labourers, para-professional and professional staff to higher paying employers. The effect will be exacerbated in regional and rural communities.

- The ageing workforce presents risks in relation to loss of labour and corporate knowledge.

Opportunities:

- There is wide scope for skills recognition within this industry – particularly in relation to LGA04 qualifications which have had limited uptake due to a lack of training providers and demand from industry.

- Advancement in Information Technology has provided greater ability to offer flexible working arrangements to assist attraction and retention.

- The sector can build attraction and retention strategies around local employment based on its role – to make communities function.

Training and Productivity

Issues:

- The Local Government sector is well into a period of immense change. Redefined job roles and scope of work may create training demand.

- Training for those roles that are specific to local government (and therefore would undertake qualifications from the LGA04 Training Package) is not readily available

- Skilling staff in accordance with some legislative requirements will prove to be difficult during skills/labour shortages.

- Decreasing budgets place additional strain on local governments to allocate funds to professional development of its staff or allocate funds to attraction strategies.

- New shared services arrangements will require up-skilling in the use of new software and IT infrastructure.

- IT has enabled flexible working arrangements and aided training providers to provide skills development in a manner that may assist to attract and retain staff.

- Increased regional growth and an aging population will demand more service provision.

- Climate change is placing heavier demands on local governments to work in collaboration with other government agencies.

- Local governments may redefine their scope of work to ensure sustainability creating training demand.

- Strategic Workforce Planning skills are required by local governments

- The reform agenda will create additional training demand for those who are required to learn new processes/activities or are redeployed.

- An ageing population will require local governments to devote services to this community sector creating a demand for additional labour and/or skills development

- The growth in population will increase demands on service provision by local governments at a time when the State Government is directing a leaner workforce.

- Due to a lack of para-professionals and increasing demands placed on unskilled workers the sector would benefit from the provision of additional training to ensure sustainability and quality of the service provided.

- Long term advancement and diversity of work can be explored through participation in VET.

- Commercially available delivery resources are limited in availability for RTOs. Due to the status of LGA04 being 'thin market' RTOs are unlikely to invest in resource development alone.

- Unskilled workers are providing extra services that might better be completed by para-professional staff.

Barriers:

- There are only a small number of training providers that currently have scope for the LGA04 Training Package.

- The skills/labour shortage predicted for WA will prove to be difficult to overcome.

- Local Government training budgets are under severe pressure.

Opportunities:

- EUPA will be required to assist RTOs and GTOs to engage better with LGs through time and cost efficient processes.

- RTOs may benefit from projects in collaboration with each other/industry to develop delivery resources.

- Apprenticeship and traineeship arrangements can be discussed with resource sector stakeholders.

EUPA

Action Plan/Priority Actions

Labour Market and Supply

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Influence National and State occupation lists – in particular the PPP and State Priority Occupation List	6-12 months	Utilise environmental scan to reference against DTWD SPOL and PPP List. Report produced and adopted by the IWG.
		1-3 years	Critical needs reflected within the SPOL & PPP List
		3-5 years	Monitor and advise DTWD of changes to skilled occupation requirements
2	Assist LGs, the Department of Local Government, associations and peak bodies to promote employment opportunities and career pathways	6-12 months	Existing and new professional development pathways/ models are communicated to peak bodies. Establish relationship with the Department of Equal Opportunity in Public Employment Work with Workforce Development Centres to promote careers
		1-3 years	Promote and facilitate collaborative promotional opportunities for associations and organisations within the resources available to EUPA. Evaluate effectiveness of EUPA activities to inform future activity
		3-5 years	Refine EUPA activities in accordance with evaluation. Evidence of reporting to DTWD regarding requirements of industries
3	Build upon established relationships with state Regional Development Commissions	1-3 years	Evidence of regional issues reported to IWGs

EUPA

Workforce Participation

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Assist LGs to identify and implement employment engagement strategies for youth, minority sectors, women and mature age (including retirees)	6-12 months	Individual LG and sector needs identified with stakeholders and reported through IWG/Board. Research current national and state initiatives that relate specifically to Aboriginal employment Research current national and state initiatives that relate to women in management
		1-3 years	EUPA activities are informed by and aligned to reports provided by Dept of Equal Opportunity in Public Employment
		3-5 years	Evidence of successful contribution to the National Skills Shortage Strategy for Local Government Evidence of successful contribution to LG frameworks and strategies
2	Research workforce development strategies ensuring that indoor and outdoor workers are considered separately.	6-12 months	Meetings held with organisational workforce planning staff
		1-3 years	Evidence-based recommendations provided to IWG

EUPA

Planning and Coordination

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Plan industry consultation and engagement activities with key sector associations and State Government Departments	6-12 months	Meetings held with associations and Government agencies with documented actions IWG meetings scheduled in accordance with Board requirements and actions completed
		1-3 years	Demonstrate progression and completion of key strategies as identified.
2	Consult with individual LGs across WA to identify specific issues and trends	6-12 months	Schedule of meetings developed Action items documented, completed and reported to the EUPA Board, IWG and industry stakeholders Agency workforce planning staff supported and networks established
		1-3 years	Revise issues and trends in accordance with environmental scanning LG workforce planning staff supported and networks established
		3-5 years	LG workforce planning staff supported
3	Assist LGs to develop/refine specific data gathering strategies where current information is not available or unreliable	6-12 months	Peak bodies and authorities consulted to determine gaps
		1-3 years	Workforce data documented and communicated to IWG and DTWD where relevant Strategies for future workforce planning influenced by new data
		3-5 years	Strategies for future workforce planning influenced by new data
4	Encourage LGs to invest in workforce planning	6-12 months	Consult with LGs to determine where EUPA effort should be concentrated
		1-3 years	Workforce development plans developed or incorporated into annual business plans at individual agency/department levels

EUPA

			Publicly funded training is utilised where appropriate
			Evidence of appropriate/improving training budget for employees within LGA annual business plans across a number of years
5	Establish a database of all industry stakeholders	6-12 months	RTO Forums utilised to generate new contacts
			Industry events attended
			Schedule of visits maintained
		1-3 years	Database maintained to ensure currency
6	Support Local Government Reform process through collaborated effort with the Department of Local Government	6-12 months	Meetings held and documented with the Department of Local Government to determine EUPA activities that can support reform project.
		1-3 years	Evidence of EUPA consultation in relation to whole-of-sector strategies
		3-5 years	Local Government Reform supported through strategic workforce planning and development

EUPA

Attraction and Retention

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Promote the uptake of existing declared traineeships	6-12 months	RTOs are scoped to deliver traineeships Research conducted into capacity for traineeship management within LGAs and associations
		1-3 years	Identify and promote champion LGs and authorities to IWG members Associations support and promote traineeships to members
		3-5 years	Increase uptake by minority groups and under utilised sectors LGs adopt traineeships as entry pathways
2	Establish new traineeships to support attraction and retention strategies	6-12 months	Reports provided to IWGs on new traineeships/cadetships and supported by industry Minority and under utilised sectors considered for establishment of specific traineeships.
		1-3 years	New traineeships/cadetships approved by the STB
3	Support Local Government Reform process through collaborated effort with the Department of Local Government	6-12 months	Meetings held and documented with the Department of Local Government to determine EUPA activities that can support reform project.
		1-3 years	Evidence of EUPA consultation in relation to whole-of-sector strategies
		3-5 years	Local Government Reform supported through strategic workforce planning and development

EUPA

Training and Productivity

	STRATEGY	TIMEFRAME	INDICATORS OF SUCCESS
1	Encourage RTOs to scope Training Package qualifications by increasing the demand for training in industry	6-12 months	Work with LGs/Departments/Associations to explore alternative funding and support arrangements Build on the established relationship with Government Skills Australia
		1-3 years	LGs adopt LGA04 Training Package for industry-specific skills development
		3-5 years	Evaluate uptake of training in LGA04 Training Package Industry demand has driven training supply Demonstrated increase in RPL where workers are skilled but hold no formal qualifications
2	Support RTOs to access delivery resources	6-12 months	Publicly available material for each sector is collated and made available to RTOs where appropriate EUPA instigates and/or supports meetings between stakeholders to design and develop material Identify opportunities to work with/through Westone to develop elearning materials.
		1-3 years	Resources developed/shared collaboratively across sectors where applicable
		3-5 years	LGs/Associations participated in funded projects to develop or validate delivery resources where appropriate
3	Innovative delivery is shared to promote uptake of training (metropolitan and regional)	6-12 months	Leading innovators in training delivery identified Commercial providers of training-specific ICT researched
		1-3 years	ICT developments are researched in relation to training provision Innovative delivery methods are promoted/showcased with industry stakeholders

EUPA

#		Timeframe	Description
		3-5 years	Innovative delivery methods are promoted/showcased with industry stakeholders
4	Monitor the effect of Local Government Reform on Training needs for those being retained in the sector as well as those made redundant	6-12 months	Observe industry trends as Local Government reform process continues
		1-3 years	Provide support and advice to associations and LGAs to access training solutions that meet individual needs
5	Research and report on the allocation of profile and uptake of user choice funding in LGA04 across WA.	3-5 years	LGs have access to customised training products that meet the specific needs of the industry.
		6-12 months	Analyse DTWD occupational groupings and reasoning Identify LGA04 profile/user choice delivery hours where available Report completed and circulated
		1-3 years	Ensure strategies support an increase in investment by DTWD
6	Identify qualification requirements for professional occupations and analyse pathways to employment	1-3 years	Professional occupations charted showing qualification pre-requisites Pathways to pre-requisite qualifications mapped and charted Critical occupations identified and prioritised for analysis Para-professional pathways identified where appropriate
		3-5 years	Cadetships/Traineeships submitted for consideration of EVAC where appropriate.
7	Explore upskilling of local government workers in training/assessment to assist delivery and/or assessment of RTO programs	6-12 months	Identify current funding arrangements surrounding TAE competency/skills set availability Identify opportunities to work with RTOs to include LG staff within training/assessment process Report to IWG
		1-3 years	Pilot delivery of funded skills sets within regions aligned to industry need and RTO capabilities.

BIBLIOGRAPHY AND REFERENCES

WORKFORCE DEVELOPMENT

Government of Western Australia, Department of Training and Workforce Development, *Western Australia's changing workforce,* April 2010

Government of Western Australia, Department of Training and Workforce Development, *Challenges to workforce participation,* April 2010

Government of Western Australia, Department of Training and Workforce Development, *Workforce development - planning and coordination,* April 2010

Government of Western Australia, Department of Training and Workforce Development, *Attracting and retaining a skilled workforce,* April 2010

Government of Western Australia, Department of Training and Workforce Development, *Training, skills formation and productivity,* April 2010

Australian Government, Department of Immigration and Citizenship, *New List of Skilled Occupations intended to replace the current skilled occupation list*

Australian Government, *Resourcing the Future, National Resources Sector Employment Taskforce: Discussion Paper,* March 2010

National Industry Skills Committee, *An Environmental Scan of Trends & Developments Impacting on the Australian Workforce,* Updated April 2009

Skills Australia, *Australian Workforce Futures: A National Worforce Development Strategy,* 2010

Chamber of Commerce and Industry, Western Australia, *Building Western Australia's Workforce for Tomorrow: Discussion Paper,* June 2010

Australian Government, Department of Education Employment and Workplace Relations, *New Jobs: Employment trends and prospects for Australian Industries*, SkillsInfo, March 2008

Department of Education Science and Training, *Overview of Industry Skills Reports,*

Australian Government, Department of Education Employment and Workforce Relations, *Regional Profile for Perth: Labour Market Region*, SkillsInfo, Census 2006

Training Council Consultations, *Labour Market and Training Delivery Overview Report,* June 2009

Australian Labor, *Skilling Australia for the future*, Election November 2007 Policy Document, www.kevin07.com.au, Authorised and printed by T. Gartrell

The Chamber of Minerals & Energy, Western Australia, *Building Tomorrow's Workforce Today, Produced by Chameleon Creative*

Australian Government, *Skilling Australia for the Future*, Discussion Paper 2008

House of Representatives, *Second Reading Speech*, *Skills Australia Bill 2008*

Skills Australia, *Workforce Futures: A Paper to Promote Discussion Towards an Australian Workforce Development Strategy*, November 2009

Chamber of Commerce & Industry WA, *WA Economic Compass OUTLOOK: September Quarter 2009*, Produced by CCI Economics

Government of Western Australia, *Beyond the Resources Boom,* State Training Board

Chamber of Commerce & Industry WA, *DRAFT Strategic Workforce Plan Prepared for Kwinana Industries Council*, Produced by CCI Economics, August 2008

Department of Education and Training, *Goldfields-Esperance Region Summary Report and Workforce Plan*, Published by State Training Board

Technology and Industry Advisory Council, *Managing Western Australia's Economic Expansion: The Need for People and Skills*, Published by the WA TIAC, September 2009

South West Group, *South West Corridor Workforce Development Plan 2009 -2024*. Prepared by 361° Stakeholder Management Services, June 2009

Government of Western Australia, Department of Education and Training, *WA Information, Electrotechnology and Utilities Industry TAC Report*

State Training Board, *Careers for Life*, Department of Education and Training, 2006

EUPA

Sloan, Julie, *An Introduction to Workforce Planning*, Published by Julie Sloan Management Pty Ltd, 2008

Service Skills Australia, *Tourism and Hospitality Workforce Development Strategy*, Published by Service Skills Australia, 2009

Government of Western Australia, Department of Training and Workforce Development, *Workforce development plan: A skilled workforce for the future Issues Paper,* Training WA

Workforce Planning Australia 2009, *Training Handouts,* www.workforceplanning.com.au

Department of Education and Training, *Public Register of Apprenticeship and Traineeship Qualifications*

Australian Bureau of Statistics, Information Paper - Census of Population and Housing

Access Economics, *Economic modelling of skills demand*

Department of the Premier and Cabinet, Profile of the WA State Government Workforce, June 2007

Department of State Development, *Reasons to Invest in Western Australia*

, *Infrastructure Australia*, Submissions 2009

Government of Western Australia, Department of State Development, *Western Australia A Statistical Overview*

Government of Western Australia, Department of State Development, *Annual Report 2008-09*

Overview of Industry Skills Report, DEEWR

WATER

Government of Western Australia, *Predicting the future demand for water resources in Western Australia,* Department of Water, January 2010

Government of Western Australia, *Draft State Water Plan*, Department of the Premier and Cabinet, October 2006

Power Point, *National Water Skills Audit and Strategy, Consultation and Strategy Development, ICE WaRM, June 2008*

Department of Water, *Water resources and water services in Western Australia,* Water Corporation, September 2008

Industry Skills Councils, *Environmental Scan, Government Skills Australia,* 2009

Australian Water Association, *Water Journal of the Australian Water Association,* August 2009

Australian Water Association, *Water Education, Water Efficiency and Water Industry Capacity Development Conferences,* March 2011

Australian Government, Department of the Environment, Water, Heritage and the Arts, *Water for the Future,* December 2009,

National Water Skills Strategy

Proposed Water Skills and Education Project, '*State of Engineering Education for Water Efficiency in Australia' A survey of engineering and built environment education*

Government of Western Australia, *Strategic workforce Plan for the water business of the Department of Water: 2009-11,* Department of Water

Western Australian Business News, *Water fight*, November 26-December 2 2009 issue

Government of Western Australia, *State Water Plan 2007,*

ELECTRICAL

Media Release - The Hon Julia Gillard MP, *Skills go green by 2010,* 23 October 2009

Government of Western Australia, *Construction Industry Snapshot,* Construction Training Fund, December 2009

Australian, Government, Department of Education Employment and Workforce Relations, *Skilled migration and the workforce: An overview,* NCVER

HIA Austral Bricks media release, *Trades Report June 2008*, Housing Industry Association Limited

NECA, *National Skills Shortages Strategy: Workforce Projections Report,* April 2009

Energy Skills Queensland, *The Skill Connection,* Issue 1, November 2008

Government of Western Australia, Officer of Energy, *Electricity Networks,* September 2008

Verve Energy, *Gas Turbine Project Underway,* www.verveenergy.com.au

National Electrical & Communications Association WA Group, *Strategic Direction and Workforce Development*

Government of Australia, Office of Energy, *Installed Electricity Generation Capacity,* August 2008

Australian Bureau of Statistics, *Estimated Gross Industry Project and Industry Employment,* March 2010

UTILITIES: ELECTRICITY

Western Australian Sustainable Energy Association Inc., *Energising WA: Sustainable Energy for this Century*

Industry Skills Councils*,* EE-Oz Training Standards ISC, *ENVIROSCAN,* Published by EE-Oz Training Standards, February 2009

CSIRO, *Growing the Green Collar Economy: Skills and labour challenges in reducing our greenhouse emissions and national environmental footprint,* Hatfield-Dodds, Turner, Schandl and CSIRO 2008

Government of Western Australia, Office of Energy, *Energy 2030: Strategic Energy Initiative Issues Paper,* Published by Office of Energy, December 2009

Australian Government, Department of Education Employment and Workplace Relations, *Employment Outlook for Electricity, Gas, Water and Waste Services,* Skills Info

Marchment Hill Consulting, *Resourcing Strategy for Utilities: MHC Perspective,* Marchment Hill Consulting, May 2009

GAS

Office of Energy, *Broadening the Gas Specification,* www.energy.wa.gov.au

EE-Oz Training Standards, *Gas Skills Summit 2010: Issues and Response Report,* February 2010

Letter to Peter Collier from Ian Foster, Gas Consultant, January 2010

WASTE

WALGA, *Waste Management Education Policy Statement,* Prepared by the Municipal Waste Advisory Council, December 2008

Department of Environment, *Statement of Strategic Direction for Waste Management in Western Australia,* Waste Management Board, September 2004

WALGA, *Policy Statement on the Waste Levy and Strategic Waste Funding,* Prepared by the Municipal Waste Management Board, February 2008

WALGA, Waste Management Education *Policy Statement,* Prepared by the Municipal Waste Management Board, December 2008

WALGA, *Waste Management Consultation and Communication Policy Statement,* Prepared by the Municipal Waste Management Board, December 2008

City of Sterling & Mindarie Regional Council, *Strategic Waste Minimisation Plan 2008- 2013: Year 1 2008,*

SITA Environmental Solutions, *Recycling & Waste Management/Disposal Sustainable Councils 2009,* May 2009

Clarius Group, *Clarius Skills Index: June Quarter,* Prepared by KPMG EconTech, July 2009

Australian Bureau of Statistics, *Waste Management Overview,* November 2009

Australian Apprenticeships Training Information Service

WMAA, *Industry Critical Jobs,* 2010

The West Australian, *National Recycling Week Liftout,* 4 November 2009

The West Australian, *Landfill Levy a wasted opportunity*, 16 June 2010

LOCAL GOVERNMENT

Government Skills Australia, *Environmental Scan 2009,* Developed by the Government and Comunity Safety Industry Skills Council GSA

Government Skills Australia, *GSA-ACELG Skills Seminar, Canberra* March 2010

Government Skills Australia, *GSA-ACELG Skills Seminar, The Local Government Workforce in the New Decade,* 3rd

EUPA

Skills Forum 2010

WALGA SURVEY: *Overview of Responses,* November 2008

WALGA: *Local Government in Western Australia*

Statewide, *Where have all the women gone?*

Statewide, *Responding to emergencies*

National Local Government Workforce Development Forum, *Aboriginal Employment Strategy ltd*, March 2010

Queensland University of Technology, *National Local Government Workforce Development Forum,* March 2010

The West Australian Liftout, WALGA, *Careers in Local Government,* February 2010

Systemic Sustainability Study*, The Journey: Sustainability into the Future,* September 2008
Government of Western Australia, Department of Local Government and Regional Development, *Annual Report 2008-2009*

WALGA, *The Western Australian Local Government Directory,* 2010

WALGA, *2010/2011 Pre-budget Submission to the State Government,* January 2010
National Local Government Skills Shortage Steering Committee, *New ways of thinking - Doing business differently:* May 2007
Australian Government, Department of Education, Employment and Workplace Relations, *Employment trends and the Australian labour market,* July 2010

WALGA news publication, *State Budget: Local Government Impact,* July 2010

WALGA news publication, *About Local Government,* July 2010

Western Councillor, *State Budget: Impact on Local Government,* May 2010

Local Government Reform Strategy

Ministerial Media Statements: State Budget 2010-2011: Working together for local government reform
Australian Government, Department of Infrastructure, Transport, Regional Development and Local Government, *National Local Government Workforce Strategy Update,* March 2010

ACELG, *Support for a Centre of Excellence,* November 2008
Director of Equal Opportunity in Public Employment, Office of Equal Employment Opportunity, *Annual Report 2009*

PUBLIC ADMINISTRATION
Government of Western Australia, *Guidelines for the WA Public Sector-Capability Profile: Levels 1-6,* July 2008, Department of the Premier and Cabinet, Rethinking Recruitment
Government of Western Australia, *Strategic Directions for the Public Sector Workforce 2009 - 2014,* Public Sector Commission, May 2009
Government of Western Australia, *Forward Thinking Workforce Challenges for the Public Sector,* Public Sector Commission, May 2009
Government Skills Australia, *Environmental Scan 2009,* Developed by the Government and Community Safety Industry Skills Council GSA
Government of Western Australia, Department of the Premier and Cabinet, *Rethinking Recruitment Guidelines for the WA Public Sector,* July 2008

2009/10 Public Sector Commission Annual Report - Capability and Development Branch Draft
Treasurer; Minister for Commerce; Science & Innovation; Housing & Works; *Inquiry into Public Sector Expenditure*

SURVEY: *Public Administration Training in the WA Public Sector Raw Data*

Government Skills Australia HR SURVEY: *Aggregate HR Personnel Skills Report,* April 2010
Institute of Public Affairs; Julie Novak, *A growing risk: The impacts and consequences of rising state government employment,* Research Paper October 2009

TRS Cube, *Apprentices and trainees by Government agency in training,* February 2010

Public Sector Reform Program, *Initiative 10: Strategic Workforce Planning Framework and Programs*

Government of Western Australia, Public Sector Commission, *Public Sector Reform,* June 2010

Government of Western Australia, *2010-11 Budget Overview,* May 2010

Public Sector Wages Policy 2009

Government of Western Australia, Public Sector Commission, *Approved Procedure 7 - Attraction and Retention Incentives,* May 2010

Guidelines for attraction and retention incentives in the WA Public Sector

Premier; Treasurer; Minister for State Development; *May 2010 State Budget*

Government of Western Australia, Public Sector Commission, *Public Sector Reform Issues Papers*

Public Sector Commission, *Agency Performance Service Three - Professional Development and Training* Economic Audit Committee, *Putting the Public First: Partnering with the Community and Business to Deliver Outcomes,* Final Report, October 2009

Government of Western Australia, Public Sector Commission, *Western Australian Public Sector Workforce Report,* December 2009

Government of Western Australia, Department of Treasury and Finance, *Economic Audit,* July 2010

Government of Western Australia, Public Sector Commission, *Workforce Plan 2010-2012,* February 2010 Director of Equal Opportunity in Public Employment, Office of Equal Employment Opportunity, *Annual Report 2009*

SAFETY & CORRECTIVE SERVICES

Western Australia Police, *Our People Strategy 2009-2012*, Frontline First

Western Australia Police, *People Strategy Annual Business Plan 2009-2010*

Western Australia Police, *Women in Leadership 2010-2013*

Western Australia Police, *Strategic Plan 2010-2013,*
Western Australia Police, *Summary of Trends, Workforce Implications and Potential Strategies* (Draft Document) 2009

Department of Corrective Services, *Workforce Strategic Framework 2009-2011*

Department of Corrective Services, *Critical Occupations Forecast 2008,* Workforce Planning and Strategy

Government of Western Australia, Department of the Attorney General, *Handbook and Services Guide 2010*

Government of WA, *Department of Corrective Services, Annual Report 2009*

Government of Western Australia, Fire & Emergency Services Authority, *Annual Report 2008-09,*
Government of Western Australia, Fire & Emergency Services Authority, *FESA 2023 Shaping Our Future*, *FESA Futures Strategy*

Government of Western Australia, Fire & Emergency Services Authority, State of the Service, *December 2009* Government Skills Australia, *Environmental Scan 2009,* Developed by the Government and Community Safety Industry Skills Council GSA

Australian Government, Skills Info, *Employment Outlook for Public Administration and Safety,* 2010

Surf Life Saving Western Australia*, 2009 Annual Report*, 2009

Attachment 1

The following table provides an overview of occupations in demand relevant to the industry sectors EUPA represents. The list shown here is not in any priority order. Further information is available later in this document under the relevant industry sector heading.

Attachment 1 - Summary of Critical Occupations

ANZSCO	Occupation	Justification
441312	Uniformed Police	• Regulatory requirement for qualified workers • High cost of training effort • Demographics – Ageing workforce, new communities, population growth • Emerging community and government expectations • Regional challenges – global warming and expanding populations • High attrition – retention of workers through competition for expertise • Special event planning – CHOGM 2011
132211	Finance Manager	• Lag time for training and experience– High specialisation • Demographics – Ageing of existing workforce & under represented community sectors • Retention of workers, including regional workers • Competition between industries
132311	Human Resource Manager	• Forecast strong demand • Lag time for training and experience – High specialisation • Demographics – Ageing workforce and under-represented community sectors • Retention of workers including regional areas • New training effort demand – Transition to PSP04 • Competition between industries
132411	Policy and Planning Manager	• Forecast strong demand • Lag time for training and experience – High specialisation • Demographics – Ageing workforce and under-represented community groups • Recognised deficiency in policy development • New training effort demand – Transition to PSP04
1335	Production Manager (Waste Manager)	• Lag time for experience • Emerging Technology
135199	ICT Manager nec	• Forecast strong demand due to emerging tech. • Lag time for training and experience – High specialisation • Competition between industries
1391	Commissioned Officer (Manager)	• Lag time for experience and appropriate training • Demographics – Ageing workforce • Demographics – New communities, population growth • Regional challenges –Expanding populations
139912	Environmental Manager	• Forecast strong demand – increasing community/government expectations • Lag time for training and experience – Higher Education pathway required • Demographics – Ageing workforce in Local Government • Emerging occupation • Regional challenges – particularly resource related projects and community growth • Competition between industries
139999	Other specialist	• Forecast strong demand

	Manager	• Demographics – Ageing workforce, • New / emerging technology / occupations • New infrastructure, particularly regional areas
221111	Accountant (General)	• Forecast strong demand • Lag time for training – High specialisation • Demographics – Ageing workforce • Retention of workers and competition between industries
223311	Training and Development Professional	• Emerging compulsory/voluntary development frameworks • Demographics – Ageing workforce • Retention of workers and competition between industries
223111	Human Resource Advisor (Professional)	• Forecast strong demand • Demographics – Ageing workforce • Lag time for training and experience • Retention of workers including regional areas • Competition between industries
224214	Records Manager	• Demographics – Ageing workforce • Attraction and retention of workers, including regional areas • Competition between industries
224611	Librarian	• Demographics – Ageing workforce • Attraction of workers, including regional areas
232212	Surveyor	• Forecast strong demand • Demographics – Ageing workforce • Lag time for training and experience • Retention of workers including regional areas • Competition between industries
232611	Urban and Regional Planners	• Forecast strong demand to cope with population growth • Lag time for training and experience • Little LGA04 delivery • Demographics – Ageing workforce • Regional challenges – community growth and attraction to occupation
2331	Chemical Engineer	• Forecast strong demand • Lag time for training • Emerging technologies • Competition between industry sectors
233211	Civil Engineer	• Forecast strong demand to cope with population growth • Lag time for training and experience • Redefining professional/para-professional roles • Demographics – Ageing workforce • Regional challenges – Community growth
2333	Electrical Engineers	• Competition between industry sectors
2335	Industrial, Mechanical Engineers	• Forecast strong demand - Across all the utilities sectors • Competition between industries
233915	Chemical and Environmental Engineer	• Forecast strong demand • Lag time for training • Emerging technologies • Competition between industry sectors
2422	Vocational Education & Training Teacher	• Forecast strong demand to cope with increased prison populations • Demographic – Ageing Workforce
2343	Chemists and Scientists	• Forecast strong demand • Lag time for training • Emerging technologies • Competition between industry sectors

EUPA

234399	Environmental Scientist	• Forecast strong demand – increasing community/government expectations • Lag time for training and experience – Higher Education qualifications preferred • Emerging occupation • Regional challenges – particularly resource related projects and community growth • Competition between industries
251311	Environmental Health Professionals	• Forecast strong demand – increasing community/government expectations • Little LGA04 delivery and attraction to occupation • Regulation of other industries • Demographics – Ageing workforce in local government • Regional challenges – community growth
253411	Psychiatrist	• Forecast strong demand – increasing mental health/drug issues • Lag time for training – high specialisation • Demographics – Ageing workforce • Difficult to fill, including regional challenges
2621	GIS and SCADA specialists	• Forecast strong demand • Lag time for training • Emerging technologies
2723	Psychologist	• Forecast strong demand – increasing mental health issues • Lag time for training – high specialisation • Demographics – Ageing workforce • Difficult to fill, including regional challenges
272511	Social Worker	• Forecast strong demand – increasing mental health and drug issues • High community expectations • Demographics – Ageing workforce • Difficult to fill, including regional challenges
272612	Recreation Officer	• Demographics – Ageing workforce • Retention of workers including regional areas
3114	Science Technician	• Forecast strong demand • Lag time for training • Emerging technologies • Competition between industry sectors
312211	Civil Engineering Draftsperson	• Forecast strong demand • Demographics – Ageing workforce and growing population • Lag time for training and experience • Retention of workers including regional areas
312113	Building Inspector	• Forecast strong demand – population growth • Regulation requirements • Demographics – Ageing workforce
312116	Surveying or cartographic Technician	• Forecast strong demand • Demographics – Ageing workforce • Retention of workers including regional areas • Competition between industries (resources)
312212	Civil Engineering Technician	• Forecast strong demand • Demographics - Population growth • Lag time for training • Emerging technologies • Competition between industry sectors
3123	Electrical Engineering Draftspersons and Technicians	• Competition between industry sectors

3125	Mechanical Fitter	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
3126	Risk and Safety Engineer	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
313112	ICT Support Technicians	• Forecast strong demand due to emerging tech. • Competition between industries
3223	Welder	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
323	Mechanical & Metal Trades	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
3232	Plant Fitter (Metal Fitter/Machinist)	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
33	Building & Construction Trades	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries
334114	Gasfitter (Gas Distribution Officer/ Main and Line Fitter)	• Forecast strong demand - national and state skills shortage • Demographics – Population growth and construction of dwellings • Licensing/Regulatory requirement
341111	Electrician (General) including Railway signal electrician	• Forecast strong demand - national and state skills shortage • Demographics - Population growth and ageing workforce • Competition between industries • Licensing/Regulatory requirement
341112	Electrician (Special Class) Instrumentation Hazardous area	• Emerging occupation/skills – For resources sector • Competition between industries • Occupation is a pre-requisite for employment in some resources sector organisations • Licensing/Regulatory requirement
342111	Air Conditioning and Refrigeration Mechanic	• Forecast strong demand - national and state skills shortage • Demographics – Population growth and construction of dwellings • Licensing/Regulatory requirement
342211	Electrical Linesworker: Transmission Distribution Rail Traction	• Difficult to fill- Global shortage • Forecast strong demand - Large transmission and distribution projects in pipeline • Emerging technology - National Broadband Network • Limited training opportunities locally in WA • Demographics - ageing infrastructure and need for expansion due to population growth
342212	Technical Cable Jointer	• Difficult to fill - Global shortage & extensive overseas recruitment • Limited training opportunities and very few trainees. • Forecast strong demand - Large underground projects and ageing infrastructure • Demographics - Ageing workforce • Competition for labour between states
342313	Electronic Equipment Trades	• Forecast strong demand - Electronics goods production • Emerging technology - Electronic systems in Building and Construction projects
342314	Electronic Instrument Trades Worker	• Forecast strong demand - Electronics goods production • Emerging technology - Electronic systems in Building and Construction projects

EUPA

	(General)	
342315	Electronic Instrument Trades Worker (Special Class)	• Forecast strong demand - Electronics goods production • Emerging technology - Electronic systems in Building and Construction projects
342412	Telecommunications Cable Jointer	• Forecast strong demand - Large national projects
342413	Telecommunications Lineworker	• Forecast strong demand - Large national projects
342414	Telecommunications Technician	• Forecast strong demand - National projects • Difficult to fill – National Skills Shortage
362213	Gardeners (Horticulturalists/Parks & Gardens)	• Demographics – Ageing workforce • Difficult to fill, including low wages and lack of attraction to occupation
3992	Operators (Waste Recovery Facility, Electrical Generation, Gas)	• Demographics – Ageing workforce • Difficult to fill, including low wages and lack of attraction to occupation
3999	Instrumentation Technician	• Competition between industry sectors
411711	Welfare Support Worker (Youth Worker, Community Worker)	• Forecast strong demand – increasing mental health and drug issues • High community expectations • Demographics – Ageing workforce • Difficult to fill, including regional challenges
421111	Child Care Worker	• Forecast strong demand – increasing demand for employment of women with children • Demographics – Ageing workforce and population growth
423111	Aged Carer	• Forecast strong demand – change in population demographic (ageing) • Demographics – Ageing workforce and population
442217	Security Officer	• Demographics – Ageing workforce • Attraction and retention of workers • Competition between industries
431999	Hospitality Worker nec (Caterer)	• Retention of workers including regional areas • Competition between industries
441211	Fire and Emergency Workers	• Regulatory requirement for qualified workers • High cost of training effort • Demographics – Ageing workforce • Demographics – New communities, population growth • Working requirements – shift workers • Regional challenges – environmental conditions and expanding populations
4421	Prison Officer Custodial	• Regulatory requirement for qualified workers • High cost of training effort • Demographics – Ageing workforce & population growth • Regional challenges – expanding populations • Special event planning – New Derby Prison to open 2012
511111	Contract, Program and Project Administration	• Forecast strong demand • Demographics – Ageing workforce • Retention of workers, including regional areas • Competition between industries

EUPA

512111	Office Manager	• Lag time for experience required • Demographics – Ageing workforce and under-represented community groups • Attraction and retention in regional areas
521111	Personal Assistants	• Demographics – Ageing workforce • Retention of workers including regional areas • Competition between industries
531111	General Clerk	• Forecast strong demand • Demographics – Ageing workforce • Retention of workers, including regional areas
551111	Accounts Clerk	• Demographics – Ageing workforce • Competition between industries including regional areas
551311	Payroll Clerk	• Retention of workers including regional areas • Competition between industries
561311	Filing or Registry Clerk	• Demographics – Ageing workforce • Retention of workers including regional areas • Competition between industries
561611	Switchboard Operators	• Demographics – Ageing workforce • Attraction and retention of workers
591113	Purchasing Officer	• Demographics – Ageing workforce • Retention of workers, including regional areas • Competition between industries
599411	Human Resources Clerk	• Forecast strong demand • Demographics – Ageing workforce • Retention of workers including regional areas • New training effort - Transition to PSP • Competition between industries
599599	Inspectors and Regulatory Officers	• Forecast strong demand – environmental and increasing legislative demands • Licensing / regulatory requirements • Demographics – Ageing workforce • Regional challenges – Retention of workers • Competition between industries
599999	Rates Officer	• Demographics – Ageing workforce • Attraction and retention of workers
7129	Stationary Plant Operator	• Forecast strong demand • Demographics – ageing workforce and population growth • Attraction and retention due to low wages in local government (compared to resource sector) • Competition between industries
7212	Earthmoving Plant Operators	• Forecast strong demand • Demographics – ageing workforce and population growth • Attraction and retention due to low wages in local government (compared to resource sector) • Regional challenges • Competition between industries
7219	Other Mobile Plant Operators	• Forecast strong demand • Demographics – ageing workforce and population growth • Attraction and retention due to low wages in local government (compared to resource sector) • Regional challenges • Competition between industries
7331	Truck Driver (Waste collection)	• Attraction and retention due to low wages • Regional challenges • Competition between industries

EUPA

8211	Unskilled/Labourers	• Competition between industries