

2010

Engineering and Automotive
Training Council Inc

Industry Critical Occupations Report

March 2010



INTRODUCTION

This report is based on information and data gathered through a variety of sources which include surveys, interviews with industry associations but, more importantly, the findings have been obtained through an extensive on-site visit campaign undertaken by the Engineering and Automotive Training Council (EATC).

The data contained in this report is evidence-based and is not anecdotal information that has been deduced from other industry sources. The EATC believes the report's content reflects the current position relative to the Engineering and Automotive Industry skills demand.

The definition of "Industry Critical Occupations" has been determined by the Department of Training and Workforce Development as being:

An Industry Critical Occupation is a skilled occupation that is in critical demand (ie, crucial to industry operations, growth and development, and/or could seriously harm business viability if not addressed).

*An Industry Critical Occupation is **not** an occupation that is:*

- *Seasonal;*
- *A labour shortage;*
- *Low or unskilled;*
- *Difficult to fill because of industry pay and conditions; or*
- *A result of attraction and retention issues.*

When applying the above definition to all the occupations contained in this report relative to **current** skills demand requirements, no occupations would be categorised as being "Industry Critical Occupations."

Notwithstanding the above comments, it is the EATC view that most of the occupations in this report are currently in demand or in high demand and are dependent on which sector of industry their skills are required, ie Mining, Service Maintenance and some sectors of the Automotive Industry. A more detailed development of our findings is clarified further in this report.

Further, there is little evidence that the expected mining and resource surge has commenced to any significant degree in the mechanical construction sector. Therefore, at this time there is no syphoning effect of skilled trades from the Engineering and Automotive Industry sectors to the resource industry.

EATC believes that this position will change within twelve months, which could result in many of the occupations contained in this report becoming "Industry Critical Occupations" as defined by the Department of Training and Workforce Development's definition of industry critical occupations.

AUTOMOTIVE

The EATC has undertaken a complete review of what occupations within the Automotive Industry would be categorised as “Industry Critical Occupations”.

Following this review, the EATC believes that at present no automotive trades would be defined as “Industry Critical Occupations”, however, the following automotive trades are currently in demand or high demand - Panel Beaters, Spray Painters and Heavy Automotive Mechanics.

The consultative process undertaken with the Automotive Industry has given the EATC a better indication as to what trades may become Industry Critical Occupations, these being:

- Automotive Technicians – Light and Heavy
- Panel Beaters
- Spray Painters

All other automotive trades will remain either in demand or high demand categories and to help overcome the pending increase in demand for these occupations, the Automotive Industry must address the following issues:

- Overturn the low take-up of automotive apprenticeships/ traineeships.
- Retrain non-trade workers using FastTrack or RPL (Recognition of Prior Learning) process.
- Increased skilled migration programs for these trades.

Failure to address the impending skills shortage will lead to skilled employment issues as faced in the resource “boom” of 2005-2008.

Automotive Occupations

Light Vehicle Technicians (Mechanic)

The current demand for Light Vehicle Technicians (Mechanics) has remained stable, and RTOs report a steady take-up of Automotive Light Vehicle Apprenticeships, but with attrition rates within this sector being approximately 40%, future industry skills issues will only worsen.

With the onset of a mining and resource surge, skilled Light Vehicle Mechanics will be drawn by the large pay incentives that the mining and resource sectors can offer, thus creating a large exodus of skilled Light Vehicle Mechanics away from regional and CBD areas, potentially creating an Industry Critical Occupation.

Heavy Duty Technicians (Mechanic)

The current demand within the Heavy Duty Sector is high, mainly as a result of the infrastructure contracts throughout Western Australia, both civil, road transport and mining industry sectors. Heavy Duty Technicians (Mechanics) are an essential occupation in all these industry sectors.

Automotive Electrician

Current demand for Automotive Electricians is not high mainly due to the fact that the Light and Heavy Vehicle Mechanics carry out a large portion of the duties in this occupation, but demand will increase with the onset of the mining and resource sectors employing dedicated Automotive Electricians within the next twelve-month period. This occupation will fall into a skills shortage situation and will be in high demand, but it will not be an Industry Critical Occupation.

Automotive Panel Beater

The current demand for Automotive Panel Beaters is high and businesses report a lack of skilled tradespersons within this sector. RTOs report a lack of candidates for apprenticeships and traineeships within this sector and this situation will worsen due mainly as a result of natural attrition occurring and the lack of replacement staff currently under training contracts.

Automotive Spray Painters

The current demand for Automotive Spray Painters is high and employers report difficulties in employing skilled tradespersons within this sector. RTOs also report declining class numbers for training and if this situation is left unattended it will create an Industry Critical Occupation.

Vehicle Body Builder

The current demand for Vehicle Body Builders is steady, but the skill sets used by Vehicle Body Builders make these occupations attractive to the "Engineering Fabrication Sector" within the mining and resource industry, thus creating a skills shortage within regional and CBD businesses within the next twelve-month period and beyond.

Vehicle Trimmers

This sector of the Automotive Industry is very small in comparison to other sectors. Vehicle Trimmers may cross over and utilise their skills for upholstery work in the Furniture Industry.

The demand for Vehicle Trimmers will remain relatively small in this discrete part of the industry.

Automotive Technician-Outdoor Power Equipment

This sector of the Automotive Industry is small in comparison to other sectors, however, it is vital in maintaining crucial machinery and plant that is required both in the domestic market and in many industrial sectors, especially civil and building construction.

A steady demand currently exists for trade skills in this sector. The EATC believes this will increase to a high demand category within the next twelve months.

Automotive Technician – Marine

The Marine sector has been experiencing significant growth within the Pleasure Craft Industry, with demand for technicians maintaining inboard and outboard motors rising dramatically.

Industry training of apprentices is insufficient to cater for the demand from the public. This sector is currently experiencing steady demand for the skills of this trade.

ENGINEERING

Engineering Occupations

The Engineering Industry in Western Australia is predominantly male gender based and is involved in the manufacturing, installation, repair and maintenance of products. Engineering tradespersons are employed in a wide range of industries in assorted occupations that manufacture, install, repair and maintain plant equipment.

Occupations within the Engineering Industry include: Engineers, Shipwrights, Boat and Ship builders, Welders, Fabricators (Heavy and Light), Mechanical Fitters, Machinists, Electricians, Draughtpersons, Locksmiths and Jewellers.

Certain sectors of the Engineering Industry are highly regulated, these include; Electricians, Aircraft Maintenance Engineers and workers in the industry using ozone depleting gases.

Eighty-five percent (85%) of the Metals, Manufacturing and Engineering Industry is mainly comprised of small to medium businesses, having less than twenty employees, fifteen percent (15%) are businesses with more than fifty employees.

Employment growth within the industry is predicted to expand in the near future due to the large number of anticipated resource projects in the expanding resources industry.

Most of the occupations in this industry are “traditional trades” that have historically been full-time based. The work patterns for the Engineering and Services Industries support full-time workers.

Local press employment advertisements have shown a very high number of vacancies for Metal Fabricators, Welders, Electricians and Mechanical Fitters over the past year and there is no sign of abatement.

Major Issues

There are very high wages being paid in the Mining and in the Engineering Construction Industry. Both industries are going from strength-to-strength but are encountering difficulty in attracting skilled workers. The upsurge in defence spending with government contracts across Australia to build a number of navy vessels is adding to the pressure on availability of skilled labour across the State.

The increasing number of developments and construction projects competing for skilled labour is exacerbating the skills shortage problem, as large projects are drawing the skilled labour force from the rest of the State's labour market by offering much higher wages. This trend has been cyclical over the past decades with some fairly sharp highs and lows. Up until early 2008 at the beginning of the global financial crisis, skilled labour shortages were critical. Currently, the skilled labour availability seems to still be satisfactory. However as previously stated, there is a strong possibility of skilled labour shortages occurring again in the near future.

In the next few years Western Australia is forecast to be on a high cycle of employment in the industry, this will have the effect of maintaining relatively high wages across all sectors.

The majority of employment in this industry is located in the metropolitan area (78%), with (22%) in regional areas. Metal tradespersons work in all industries throughout the State, however, most of the central offices and factories are located in the metropolitan area, supporting regional mining and resource projects.

There has been a significant increase in interest and awareness in the Engineering trades over the past few years, which has resulted in more indentured apprentices across all trades, particularly Metal Fabricators, Welders, Electricians and Mechanical Fitters.

Technological change in the industry is incremental rather than dramatic. The traditional skills base in all trades is required with specific applications depending upon the industry sector. Specialist welding technology applications build upon existing skills of trades people. There is a shortage of Metal Machinists with high levels of skill, particularly those with CNC experience.

Manufacturing companies are improving their production processes by modernising their equipment to a more automated computer controlled system to increase the quality and output of their products. The increasing use of computers and numerically controlled equipment is creating a requirement for people to acquire and continually improve their skills in this area. As technology is rapidly changing, general skills, like communication, analytical and computer (IT) skills, are increasingly important.

The expected resources industry surge is essentially a continuation of an existing heavy construction schedule in the North West. Consequentially, as one project finishes the workers from that project move to another project. It is expected that in the next twelve months the supply will be exceeded by the demand, particularly by the following skilled workers. As previously stated they do not meet the definition of Industry Critical Occupations, but as soon as any imbalance in supply and demand occurs they all become critical.

The following is a reflection of the skills demands of engineering occupations as of March 2010:

Engineering Tradesperson (Fabrication)

There is an ongoing high demand for skilled labour in all the fabrication trades, particularly for experienced workers.

Fabricator Heavy (commonly known as Boilermaker and Boilermaker/Welder)

This occupation is in high demand in all industry sectors.

Fabricator Light (commonly known as Sheetmetal Workers)

This occupation is in strong demand in all industry sectors.

Welders

The demand for ferrous and non-ferrous Welders is static, however, the demand for steel Welders appears to have levelled out at this particular time. Good first-class Welders are still in demand, but the market is steady. Aluminium Welders in the shipbuilding industry are still in continuing short supply.

Shipwrighting and Boatbuilding

The nature of the ship and boat building industry has changed in recent years. The traditional shipwright training is not being renewed as training is dropping off due to a fall in demand for new boats. This will cause a shortage in the future of multi-skilled trades' people. The ship building industry has changed to a production model that tends to compartmentalise skills rather than multi-skill workers, with a high emphasis on welding skills.

Engineering Tradesperson (Mechanical)

Mechanical Fitter (all types except Heavy Duty)

The demand for Mechanical Fitters across all aspects of industry is continuing and has remained consistently high over the last few years, which includes Marine Fitters.

Plant Mechanic/Heavy Duty Fitter

The demand for experienced Plant Mechanics appears to be getting stronger and shows no sign of diminishing in the near future. This occupation is in high demand and may become critical in the foreseeable future.

Refrigeration and Air Conditioning Mechanic

Increased electrical skills are reflected in this sector and demand for skilled labour in both refrigeration and air-conditioning is high.

First-Class Machinist

This occupation is currently in steady demand particularly those with Computer Numerically Controlled (CNC) skills.

Aeroskills

Aeroskill trades' people in the various occupations of this industry sector in Western Australia are in steady demand, especially in the mechanical and avionics fields of the aerospace industry.

Trades Assistant

This non-trade occupation is also in steady demand, particularly experienced workers. In the last few years many experienced Trades Assistants have taken advantage of skills recognition and FastTrack programs to gain trade qualifications.

Engineering Tradesperson (Electrical)

Electrician

This occupation is in the highest demand and there is an insatiable appetite for Electricians across all industry sectors. In the oil and gas and resource sectors, Electricians with instrumentation skills and qualifications is growing.

Draftperson

This professional occupation is in high demand across all sectors of the industry.

SUMMARY

Skilled labour shortages are predicted for Western Australia in the next several years as infrastructure development continues. This will have the effect of maintaining relatively high wages across all sectors.

Creating flexible work arrangements for mature staff such as the provision of part-time employment and creating roles that retain their status and value within the organisation is essential.

Organisations should proactively seek to attract and retain mature-aged workers.