

## EDUCATION, SCIENCE AND TRAINING

### SENATE LEGISLATION COMMITTEE - QUESTIONS ON NOTICE 2005-2006 BUDGET ESTIMATES HEARING

**Outcome:** 1  
**Output Group:** 1.1 – Funding for Schools

#### **DEST Question No. E070\_06 & E443\_06**

Senator Carr asked on 1 June 2005, EWRE Hansard page 89 and 94.

#### **Question:**

What criteria was used to determine the 24 regions selected for the establishment of an Australian Technical College? What data is available to demonstrate that each of these regions can support such an initiative?

#### **Answer:**

##### *Australian Technical Colleges data*

The sites selected for Australian Technical Colleges reflect a number of factors including:

- a reasonable working age population base, including at least one sizeable population centre;
- a substantial base of trades-related industries (eg manufacturing, construction, mining, transport, storage, power, water utilities);
- level of youth unemployment;
- level and age of employment of tradesperson and related worker occupations; and
- skill needs.

Key data on each of the regions selected for the establishment of the Colleges was obtained from:

- the 2001 Census conducted by the Australian Bureau of Statistics; and
- the National and State Skill Shortage Lists, based on labour market intelligence, prepared by the Department of Employment and Workplace Relations (DEWR)

A summary of the relevant data is attached.

## New South Wales - Dubbo

### Key labour market data (2001 census)

- Working age (15 -64) population: 24,095
- Total Employed: 16,630
- Total Unemployed (15-24): 440
- Unemployment (15-24) rate: 13%
- Employment in trades as a per cent of total employment: 13.6%
- Per cent of tradespersons and related workers 45 years or older: 26.3%

### Age Profile

0-14: 9,350  
15-24: 5,102

### INDUSTRY AND EMPLOYERS

#### Major industries

- Agriculture (Wheat, cotton, cattle, sheep and vegetables)
- Retail
- Manufacturing
- Construction
- Property and business services

#### Major employers

- Western Plains Zoo

## New South Wales - Gosford

### Key labour market data (2001 census)

- Working age (15 -64) population: 172,222
- Total Employed: 110,544
- Total Unemployed (15-24): 3,358
- Unemployment (15-24) rate: 15.4%
- Employment in trades as a per cent of total employment: 14.5%
- Per cent of tradespersons and related workers 45 years or older: 27.7%

### Age Profile

0-14: 183,774  
15-24: 115,038

### INDUSTRY AND EMPLOYERS

#### Major industries and employers

- Agriculture
- Manufacturing
- Construction
- Wholesale/Retail
- Tourism

#### Major Employers

- Sanitarium
- Sara Lee
- Master Foods

## **New South Wales - Hunter**

### **Key labour market data (2001 census)**

- Working age (15 -65) population: 301,351
- Total Employed: 184,688
- Total Unemployed (15-24): 7,918
- Unemployment (15-24) rate: 19.3%
- Employment in trades as a per cent of total employment: 14.6%
- Per cent of tradespersons and related workers 45 years or older: 25.9%

### **Age Profile**

0-14: 97,964  
15-24: 62,798

## **INDUSTRY AND EMPLOYERS**

### **Major industries**

- manufacturing
- coal and mining
- viticulture and winemaking
- tourism
- power generation
- agribusiness
- information communications technology.

### **Key employers**

- One Steel
- Electrolux Home Products
- Tomago Aluminium
- Port Waratah Coal Service
- Ampcontrol
- Varley Engineering
- United Goninans
- Hunter Health
- Hunter Water Corporation
- Energy Australia
- University of Newcastle
- NIB Health Fund Ltd
- Australian Defence Industries (ADI) Ltd

## **New South Wales - Illawarra**

### **Key labour market data (2001 census)**

- Working age (15 -65) population: 184,576
- Total Employed: 114,708
- Total Unemployed (15-24): 4,262
- Unemployment (15-24) rate: 17.1 %
- Employment in trades as a per cent of total employment: 14.8%
- Per cent of tradespersons and related workers 45 years or older: 25.9%

### **Age Profile**

0-14: 61,358  
15-24: 39,552

### **INDUSTRY AND EMPLOYERS**

#### **Major industries**

- Wholesale and Retail
- Manufacturing
- Health and Community Services
- Technology and research
- Property and Business Services
- Education
- Construction

#### **Key Employers**

- BHP
- Bluescope Steel

## **New South Wales - Lismore/Ballina**

### **Key labour market data (2001 census)**

- Working age (15 -65) population: 68,821
- Total Employed: 40,752
- Total Unemployed (15-24): 1,713
- Unemployment (15-24) rate: 22.3 %
- Employment in trades as a per cent of total employment: 11.7 %
- Per cent of tradespersons and related workers 45 years or older: 31.8%

### **Age Profile**

0-14: 22,555  
15-24: 13,632

### **INDUSTRY AND EMPLOYERS**

#### **Major industries**

- Education
- Health
- Manufacturing
- Agriculture
- Service business sectors
- Tourism
- Construction

#### **Key employers**

- Woolworths
- Kmart
- Franklins.
- Hospitals
- Southern Cross University
- Lismore City Council
- Norco Cooperative

## **New South Wales - Port Macquarie**

### **Key labour market data (2001 census)**

- Working age (15 -65) population: 79,440
- Total Employed: 44,839
- Total Unemployed (15-24): 1,663
- Unemployment (15-24) rate: 21.1%
- Employment in trades as a per cent of total employment: 13.3%
- Per cent of tradespersons and related workers 45 years or older: 34.2%

### **Age Profile**

0-14: 28,276  
15-24: 13,556

### **INDUSTRY AND EMPLOYERS**

#### **Major industries**

- retail
- health and community services
- building and construction
- manufacturing
- education
- tourism
- agriculture

#### **Key employers**

- Retail outlets
- City Council
- Hospitals and associated health care services
- Education and Training sector
- Catholic Diocese
- Tourism sector

## **New South Wales - Queanbeyan**

### **Key labour market data (2001 census) (ACT and region)**

- Working age (15 -65) population: 245,910
- Total Employed: 181,147
- Total Unemployed (15-24): 4,190
- Unemployment (15-24) rate: 11.2%
- Employment in trades as a per cent of total employment: 8.5%
- Per cent of employed tradespersons and related workers 45 years of age or older: 25.6%

### **Age Profile**

0-14: 75,164  
15-24: 55,266

### **INDUSTRY AND EMPLOYERS**

#### **Major industries**

- Construction
- Metals and Engineering
- Retail
- Primary Industries
- Tourism
- Due to the close proximity of Canberra, Defence, Government and Administration are also relevant.

#### **Key Employers**

- Woolworths
- Coles
- Spotlight
- Country Energy/ACTEWAGL

## **New South Wales - Western Sydney**

### **Key labour market data (2001 census)**

- Working age (15 -65) population: 843,777
- Total Employed: 517,433
- Total Unemployed (15-24): 13,945
- Unemployment (15-24) rate: 13.3%
- Employment in trades as a per cent of total employment: 13.4%
- Per cent of tradespersons and related workers 45 years or older: 29.3%

### **Age Profile**

0-14: 276,377  
15-24: 181,217

### **Secondary Students in the State**

Year 11: 68,259  
Year 12: 59,943

## **INDUSTRY AND EMPLOYERS**

### **Major industries include:**

- Manufacturing (this is considered to be the largest industry in the region as it accounts for 16% of the total employment)
- Property and business services
- Finance and insurance
- Construction (will remain one of the major industries due to the growth in population)

### **Major growth industries include:**

- Information and communication technologies
- Advanced manufacturing (including biotechnology industries)
- Tourism and recreation
- Business services
- Retail

### **The region's other industry sectors include:**

- Education
- Health
- Agriculture
- Defence and aerospace

### **Key employers include:**

- State Government, in particular Health and Education
- Retailers Woolworths and Coles Myers
- Advance Metal Products
- Broens Engineering
- Nepean Engineering

## Victoria - Bairnsdale

### Key labour market data (2001 census)

- Working age (15 -65) population: 93,836
- Total Employed: 57,264
- Total Unemployed (15-24): 2,025
- Unemployment (15-24) rate: 18.5%
- Employment in trades as a per cent of total employment: 14.7%
- Per cent of employed tradespersons and related workers 45 years of age or older: 30.5%

### Age Profile

0-14: 33,068  
15-24: 18,681

### INDUSTRY AND EMPLOYERS

#### Major Industries

- School education
- Hospitals and nursing homes
- Government administration
- Specialised food retailing
- Cafes and restaurants
- Legal and accounting services
- Grain, sheep & beef cattle farms
- Post school education
- Medical and dental services
- Community care services

#### Key Employers

- Patties Bakery
- Riviera Properties
- Kennedy Trailers
- Abalone Fisherman's Cooperative
- Vegco
- Whitters Street Cranes

## Victoria - Bendigo

### Key labour market data (2001 census)

- Working age (15 -65) population: 96,752
- Total Employed: 62,546
- Total Unemployed (15-24): 1,948
- Unemployment (15-24) rate: 15.8%
- Employment in trades as a per cent of total employment: 13.0%
- Employed tradespersons and related workers 45 years of age or older: 27.5 %

### INDUSTRY AND EMPLOYERS

#### Major industries and employers

- Manufacturing (12.7% of all employment)
- Education
- Construction
- Retail
- Business and Professional Services.

#### Key employers

- AAPT LTD
- City of Greater Bendigo
- Safeway
- Quality Resort - All Seasons Bendigo
- McPhersons printing
- Hazeldene's Chicken Farms Pty Ltd
- ADI Limited
- Industrial Automation Pty Ltd

## Victoria - Eastern Melbourne

### Key labour market data (2001 census)

- Working age (15 -65) population: 693,722
- Total Employed: 498,347
- Total Unemployed (15-24): 9,878
- Unemployment (15-24) rate: 10.8%
- Employment in trades as a per cent of total employment: 10.5%
- Per cent of employed tradespersons and related workers 45 years of age or older: 31.1%

### Age Profile

0-14: 189,768  
15-24: 146,291

### INDUSTRY AND EMPLOYERS

#### Major Industries

- School Education
- Hospitals and Nursing Homes
- Government Administration
- Specialised Food Retailing
- Supermarket and Grocery Stores
- Cafes and Restaurants
- Legal and Accounting Services
- Motor Vehicle Services

#### Key employers

- MEGT
- Ventura Bus Lines P L
- Australian Home Care
- SAFEWAY
- National Hearing Centres
- Hungry Jack's Pty Ltd
- Department of Human Services – Melbourne
- Victorian Automobile Chamber Of Commerce
- Radio Frequency Systems
- Coles Supermarket Pty Ltd
- Hospitality Staff Management



## Victoria - Geelong

### Key labour market data (2001 census)

- Working age (15 -64) population: 127,358
- Total Employed: 82,490
- Total Unemployed (15-24): 2,715
- Unemployment (15-24) rate: 15.9%
- Employment in trades as a per cent of total employment: 14.8%
- Per cent of employed tradespersons and related workers 45 years of age or older: 27.9%

### Age Profile

0-14: 40,952  
15-24: 26,682

### INDUSTRY AND EMPLOYERS

#### Major industries

- Education
- Hospitals and nursing homes
- Specialised food retailing
- Cafes and restaurants
- Motor vehicle services
- Marketing and business management services

#### Key employers

- G-Force Recruitment Ltd
- Bartter Enterprises Pty Ltd
- Ford Motor Company Australia
- Air Radiators Pty Ltd
- SAFEWAY
- Citadel Protection Services
- Barwon Water
- McDonalds Corio
- Bacchus Marsh Coaches Pty Ltd
- Australian Wool Handlers
- McHarry's Buslines Pty Ltd
- Ripcurl
- Cotton On Clothing

## Victoria - Sunshine

### Key labour market data (2001 census)

- Working age (15 -65) population: 460,111
- Total Employed: 295,997
- Total Unemployed (15-24): 8,635
- Unemployment (15-24) rate: 14.6%
- Employment in trades as a per cent of total employment: 13.0%
- Per cent of employed tradespersons and related workers 45 years of age or older: 27.5%

### Age Profile

0-14: 150,332  
15-24: 96,360

## INDUSTRY AND EMPLOYERS

### Major industries

- School Education
- Hospitals and Nursing Homes
- Government Administration
- Specialised Food Retailing
- Supermarket and Grocery Stores
- Cafes and Restaurants
- Legal and Accounting Services
- Motor Vehicle Services
- Grain, Sheep, and Beef Cattle Farm

### Key employers

- Ford Motor Company of Australia Limited
- Araco Australia
- Star Track Express
- Baiada Poultry Pty Ltd
- Ryco Hydraulics
- Olex Australia Pty Ltd
- Qantas airways limited
- Cmi operations Pty Ltd
- Compass recruitment
- Atco controls Pty Ltd
- Safeway
- Australia post
- RMD metal products
- CMI forge
- Foxtel
- Windsor Caravans Pty Ltd
- Somerville retail services Pty Ltd
- Schiavello (VIC) Pty Ltd

## Victoria - Warrnambool

### Key labour market data (2001 census)

- Working age (15 -65) population: 37,449
- Total Employed: 26,766
- Total Unemployed (15-24): 539
- Unemployment (15-24) rate: 11.4%
- Employment in trades as a per cent of total employment: 12.1%
- Per cent of employed tradespersons and related workers 45 years of age or older: 25.9%

### Age Profile

0-14: 14,098  
15-24: 7,313

### INDUSTRY AND EMPLOYERS

#### Major industries

- Education
- Hospitals and nursing homes
- Government administration
- Specialised food retailing/cafes and restaurants
- Legal and accounting services
- Motor vehicle services
- Grain, sheep and beef cattle farms
- Medical and dental services
- Accommodation
- Marketing and business mgt services

#### Key employers

- WESTVIC Work Force
- Midfield Meat international
- Warrnambool cheese and butter factory
- McDonalds
- Hungry Jack's Pty Ltd
- Corangamite Shire Council
- Warrnambool Co-op
- Sou'west Seafoods Pty Ltd
- Warrnambool City Council
- Rodger Constructions Pty Ltd
- St John of God Health Care Inc
- George Taylor's stores
- Terang & Mortlake Health Services
- Clarke's pies

## Queensland - Gladstone

### Key labour market data (2001 census)

- Working age (15 -65) population: 27,758
- Total Employed: 18,389
- Total Unemployed (15-24): 655
- Unemployment (15-24) rate: 17.2%
- Employment in trades as a per cent of total employment: 18.3%
- Per cent of tradespersons and related workers 45 years or older: 27.0%

### Age Profile

0-14: 10,534  
15-24: 5,538

### INDUSTRY AND EMPLOYERS

#### Major industries

- Metals and minerals processing,
- Government utilities (Queensland Rail, power and port services),
- Engineering,
- Manufacturing
- Construction.

#### Key employers

- NRG Gladstone Power Station
- Central Queensland Ports Authority
- Boyne Smelters
- Cement Australia
- Comalco Alumina Refinery
- Queensland Alumina Limited
- Orica Australia
- Golding Constructions

## Queensland - Gold Coast

- Working age (15 -65) population: 250,156
- Total Employed: 161,119
- Total Unemployed (15-24): 5,144
- Unemployment (15-24) rate: 15.7%
- Employment in trades as a per cent of total employment: 13.3%
- Per cent of tradespersons and related workers 45 years or older: 29.6%

### Age Profile

0-14: 71,087  
15-24: 48,780

### INDUSTRY AND EMPLOYERS

#### Major industries

- accommodation
- school education
- cafes and restaurants
- specialised food retailing
- gambling services
- other recreational services (including amusement parks).

#### Key employers

- Gold Coast City Council
- Sea World Theme Park
- Billabong International
- Hotel Conrad Jupiters

## Queensland - North Brisbane

### Key labour market data (2001 census)

- Working age (15 -65) population: 103,387
- Total Employed: 73,220
- Total Unemployed (15-24): 2,014
- Unemployment (15-24) rate: 13.5 %
- Employment in trades as a per cent of total employment: 11.8%
- Per cent of tradespersons and related workers 45 years or older: 29.7%

### Age Profile

0-14: 31,501  
15-24: 21,498

### INDUSTRY AND EMPLOYERS

#### Major industries

- education (University of Queensland)
- health and business services
- manufacturing (printing and publishing, metal products, furniture, motor vehicle and industrial machinery)
- transport, freight and wholesaling

#### Key employers

- Brisbane Airport
- Major Army base at Enoggera
- BP oil refinery at Pinkenba

## Queensland - Townsville

### Key labour market data (2001 census)

- Working age (15 -65) population: 98,483
- Total Employed: 66,041
- Total Unemployed (15-24): 2,444
- Unemployment (15-24) rate: 15.3%
- Employment in trades as a per cent of total employment: 16.3%
- Per cent of tradespersons and related workers 45 years or older: 21.5%

### Age Profile

0-14: 31,808  
15-24: 23,545

### INDUSTRY AND EMPLOYERS

#### Major industries

- raw sugar production, grazing and beef processing
- public administration and defence
- manufacturing
- mineral refining
- tourism
- fishing
- education, research and tertiary services

#### Key employers

- Theiss (construction)
- Xstrata Copper (mining)
- Jupiter's Casino
- Woolworths, Coles-Myer
- QLD Nickel Refinery
- Sun Metals Zinc Refinery

## South Australia - Adelaide

- Working age (15 -65) population: 225,516
- Total Employed: 140,659
- Total Unemployed (15-24): 5,268
- Unemployment (15-24) rate: 17.1%
- Employment in trades as a per cent of total employment: 14.4%
- Per cent of tradespersons and related workers 45 years or older: 29.4%

### Age Profile

0-14: 72,994  
15-24: 48,286

## INDUSTRY AND EMPLOYERS

### Major industries

- Automotive
- School education
- Defence
- Rubber plant manufacturing

### Key employers

- Holden
- Defence, Science and Technology Organisation (DSTO)

## South Australia - Whyalla/Port Augusta

### Key labour market data (2001 census)

- Working age (15-65) population: 23,088
- Total Employed: 13,215
- Total Unemployed (15-24): 536
- Unemployment (15-24) rate: 21.1%
- Employment in trades as a per cent of total employment: 15.3%
- Per cent of tradespersons and related workers 45 years or older: 30.4%

### Age Profile

0-14: 8,014  
15-24: 4,440

## INDUSTRY AND EMPLOYERS

### Major industries

- Manufacturing (Whyalla)
- Retail trade (Whyalla, Port Augusta)
- Health and Community Services (Whyalla, Port Augusta)
- Metal ore mining (Port Augusta)

### Key employers

- Corporation of the City of Whyalla
- Onesteel

## Tamania - Northern Tasmania

### Key labour market data (2001 census)

- Working age (15 -64) population: 94,285
- Total Employed: 58,112
- Total Unemployed (15-24): 2,263
- Unemployment (15-24) rate: 19.0%
- Employment in trades as a per cent of total employment: 13.0%
- Per cent of tradespersons and related workers 45 years or older: 29.5%

### Age Profile

0-14: 31,192  
15-24: 19,536

### INDUSTRY AND EMPLOYERS

#### Major industries

- manufacturing
- property and business services
- wholesale and retail trade
- agriculture
- tourism

#### Key employers

- Comalco
- ACL Bearings

## Western Australia - Perth South

### Key labour market data (2001 census)

- Working age (15 -65) population: 209,894
- Total Employed: 138,289
- Total Unemployed (15-24): 4,396
- Unemployment (15-24) rate: 14.9%
- Employment in trades as a per cent of total employment: 12.6%
- Per cent of employed tradespersons and related workers 45 years of age or older: 28.1%

### Age Profile

0-14: 64,775  
15-24: 46,708

## INDUSTRY AND EMPLOYERS

### Major industries

- manufacturing
- retail trade
- horticulture
- fishing

### Key employers

- AUSTAL SHIPS PTY LTD
- Motor Industry Training Association of WA
- Western Power Corporation
- Woolworths
- Hungry Jack's Pty Ltd
- Department of Justice - Custodial
- Spotless Services Aust Ltd
- Image Marine
- Prestige Property Services



## Western Australia - Pilbara

### Key labour market data (2001 census)

- Working age (15 -65 population): 20,429
- Total Employed: 13,993
- Total Unemployed (15-24): 246
- Unemployment (15-24) rate: 10.2%
- Employment in trades as a per cent of total employment: 19.5%
- Per cent of employed tradespersons and related workers 45 years of age or older: 25.1%

### Age Profile

0-14: 7,216  
15-24: 3,713

## INDUSTRY AND EMPLOYERS

### Major industries

- oil and gas extraction
- metal ore mining
- school education
- other business services

### Key employers

- Ngarda Civil & Mining
- Pilbara Iron
- BHP Billiton Iron Ore Pty Ltd
- Karratha International Hotel
- Robil Engineering
- Portside Fabrication PTY LTD
- Karratha Fluid Power
- QAL Refrigeration
- Newman Engineering
- Atmar Metal Fabrication
- South Hedland Plumbing
- Pilbara Contructions PTY TLD
- Sinewave Electrical

## Northern Territory - Darwin

### Key labour market data (2001 census)

- Working age (15 -65) population: 76,686
- Total Employed: 52,530
- Total Unemployed (15-24): 1,149
- Unemployment (15-24) rate: 11.8%
- Employment in trades as a per cent of total employment: 14.2%
- Per cent of employed tradespersons and related workers 45 years of age or older: 22.1%

### Age Profile

0-14: 24,084  
15-24: 15,217

## INDUSTRY AND EMPLOYERS

### Major industries

- Manufacturing
- Agriculture, forestry and fishing
- Construction
- Wholesale and retail
- Tourism
- Health and community services

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	NSW
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S*
4112-13	Metal Machinist*	N	S*
4113-11	Toolmaker*	N	S*
4122-11	Metal Fabricator*	N	M-D, R*
4122-15	Welder*	N	S*
4124-11	Sheetmetal Worker*	N	M-D, R*
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S*
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S*
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S*
4312-11	Refrigeration and Airconditioning Mechanic*	N	S*
4313	Electrical Powerline Trades*	N	S*
4314	Electronic Instrument Trades*	N	S*
4315	Electronic Equipment Trades*	N	S*
4315-13	Business Machine Mechanic*		D*
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	Se*
4412-11	Fibrous Plasterer*	N	Se*
4414-11	Bricklayer*	N	Se*
4415-11	Solid Plasterer*	N	Se
4431-11	Plumber*	N	Se*
<b>FOOD TRADES</b>			
3322	Chef*	N	S
4512-11	Baker*		S*
4513-11	Cook	N	S
4512-13	Pastrycook*	N	R*
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		R
4913-11	Binder and Finisher		
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		S*
4922-11	Cabinetmaker*	N	S*
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S*

N = National shortage

M = Shortage in metropolitan areas

D = Recruitment difficulties

M-D = Recruitment difficulties in metropolitan areas

E = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed

## Comments on trade specialisations in NSW

**Metal Fitter: NSW:** shortages are evident for basic skills but especially for hydraulics and for shut-down and maintenance work.

**Metal Machinist: NSW:** shortages are especially for Metal Machinists with skills in CNC machinery and hand operated heavy industrial machinery.

**Toolmaker: NSW:** Shortages are particularly for Toolmakers with broad trade skills, hand operated tooling, CNC machining, plastic injection moulding, precision jobbing.

**Metal Fabricator: NSW:** shortages are especially for Metal Fabricators with ability to work from plans, multiskilled tradespersons and those with experience in weld purging.

**Welder: NSW:** shortages are especially for Welders with skills in stainless steel, aluminium, MIG and TIG welding.

**Sheetmetal Worker: NSW:** shortages are especially for Sheetmetal Workers with welding skills.

**Motor Mechanic: NSW:** shortages are especially for Motor Mechanics with specialist skills and experience in suspension, wheel alignment, engine reconditioning, used car dealerships and four wheel drives.

**Panel Beater: NSW:** recruitment is particularly difficult for panel beaters with skills in prestige vehicle repairs.

**Auto Electrician:** na

**Electrician: NSW:** shortages are apparent across most sectors including commercial and industrial work, domestic building maintenance, communications cabling and electrical fitting.

**Refrigeration and Airconditioning Mechanic: NSW:** shortages area apparent across most sectors but especially for commercial airconditioning in Sydney.

**Electrical Power Line Tradesperson: NSW:** shortages are evident in maintenance and new supply work in both the power generation and distribution sectors.

**Electronic Instrument Trades: NSW:** shortages are especially being experienced for positions requiring highly specialised experience in specified types of PLCs and control systems and positions requiring dual qualifications in electrical and instrumentation work.

**Electronic Equipment Trades: NSW:** shortages are mostly for repairers experienced in specific makes and models. **VIC:** shortages are restricted to radio and TV repair. **SA:** shortages are restricted to radio and TV repair.

**Business Machine Mechanics: NSW:** isolated recruitment difficulties exist for positions requiring experience in particular business machinery makes and models.

**Communications Trades: NSW:** shortages are less severe for cabling technicians.

**Carpenter: NSW:** shortages are most apparent for new residential building, residential maintenance and formwork carpentry.

**Fibrous Plasterer: NSW:** shortages include plasterboard fixing, cornice and ornate plastering.

**Bricklayer: NSW:** shortages are restricted to trade-level bricklayers.

**Solid Plasterer:** na

**Plumber: NSW:** shortages are evident in both the commercial and residential sectors and for roof plumbers.

**Chef:** na

**Baker: NSW:** shortage is mainly confined to broad trade skills, hand moulding skills and experience in specialised breads such as sourdough and gluten-free etc.

**Pastrycook: NSW:** shortage is mainly confined to broad trade skills and experience in making pastries from scratch.

**Wood Machinist: NSW:** shortages are especially for CNC skills, a range of experience with panel saws, spindle moulders, also experience in solid timber, laminated wood or composite material.

**Cabinetmaker: NSW:** shortages are especially for the detailed joinery and fine furniture sector.  
**VIC:** shortage is of specialist furniture makers.

**Furniture Upholsterer: NSW:** shortages are for especially for positions requiring quality re-upholstering/re-covering experience; also short supply of skills requiring combination of tasks like re-covering/automobile trimming and making custom built furniture for refurbishments.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	VIC
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S
4112-13	Metal Machinist*	N	S
4113-11	Toolmaker*	N	S
4122-11	Metal Fabricator*	N	S
4122-15	Welder*	N	S
4124-11	Sheetmetal Worker*	N	S
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades* Electronic Instrument	N	S
4314	Trades* Electronic Equipment	N	S
4315	Trades* Business Machine	N	S*
4315-13	Mechanic*		
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	M-D, R
4412-11	Fibrous Plasterer*	N	M-D, R
4414-11	Bricklayer*	N	M-D, R
4415-11	Solid Plasterer*	N	M-D, R
4431-11	Plumber*	N	M-D, R
<b>FOOD TRADES</b>			
3322	Chef*	N	S*
4512-11	Baker*		na
4513-11	Cook	N	S*
4512-13	Pastrycook*	N	S*
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		
4913-11	Binder and Finisher		D
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	M-D, R
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S

N = National shortage

M = Shortage in metropolitan areas

D = Recruitment difficulties

M-D = Recruitment difficulties in metropolitan areas

E = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed

## **Comments on trade specialisations in VIC**

**Electronic Equipment Trades: VIC:** shortages are restricted to radio and TV repair.

**Chef: VIC:** shortage is especially evident in Asian cuisines generally and Indian cuisine.

**Pastrycook: VIC:** shortages are especially for skills in European and Asian pastry.

**Cabinetmaker: VIC:** shortage is of specialist furniture makers.

## Skill Shortage List – Trades December 2004

ASCO	Occupation	AUST	QLD
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S*
4112-13	Metal Machinist*	N	S*
4113-11	Toolmaker*	N	S
4122-11	Metal Fabricator*	N	S
4122-15	Welder*	N	S
4124-11	Sheetmetal Worker*	N	S*
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S*
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades*	N	S
4314	Electronic Instrument Trades*	N	S
4315	Electronic Equipment Trades*	N	
4315-13	Business Machine Mechanic*		
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	S*
4412-11	Fibrous Plasterer*	N	na
4414-11	Bricklayer*	N	S
4415-11	Solid Plasterer*	N	na
4431-11	Plumber*	N	S*
<b>FOOD TRADES</b>			
3322	Chef*	N	S
4512-11	Baker*		na
4513-11	Cook	N	S
4512-13	Pastrycook*	N	S
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		S
4912	Printing Machinist		S
4913-11	Binder and Finisher		S
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	S*
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S

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M-D = Recruitment difficulties in metropolitan areas

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R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed



## Comments on trade specialisations IN QLD

**Metal Fitter: QLD:** Fitters who have skills to work underground on mining equipment and who have high skill levels in parts replacement for heavy earthmoving equipment are in particular shortage.

**Metal Machinist: QLD:** Metal machinists who have high level CNC machine operating skills are in particularly strong demand.

**Sheetmetal Worker: QLD:** shortages are particularly evident in the manufacture of aluminium hull boats, switchboards and stainless steel fittings.

**Electrician: QLD:** shortages are particularly acute for electrical appliance servicing and industrial electricians.

**Carpenter: QLD:** shortage is particularly for carpenters specialising in building staircases and balustrading.

**Plumber: QLD:** Mechanical Services Plumbers are particularly hard to recruit.

**Cabinetmaker: QLD:** shortages are most evident for Cabinetmakers in high quality or meticulous and visible craftwork.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	SA
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S
4112-13	Metal Machinist*	N	S
4113-11	Toolmaker*	N	S
4122-11	Metal Fabricator*	N	S
4122-15	Welder*	N	S
4124-11	Sheetmetal Worker*	N	S
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades* Electronic Instrument Trades*	N	S
4314	Electronic Equipment Trades*	N	D
4315	Business Machine Trades*	N	D*
4315-13	Mechanic*		D*
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	Se
4412-11	Fibrous Plasterer*	N	Se
4414-11	Bricklayer*	N	
4415-11	Solid Plasterer*	N	Se
4431-11	Plumber*	N	S
<b>FOOD TRADES</b>			
3322	Chef*	N	R
4512-11	Baker*		na
4513-11	Cook	N	
4512-13	Pastrycook*	N	R
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		D
4913-11	Binder and Finisher		
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	S
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S

N = National shortage

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M-D = Recruitment difficulties in metropolitan areas

E = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed

## **Comments on trade specialisations in SA**

**Electronic Equipment Trades: SA:** shortages are restricted to radio and TV repair.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	WA
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S*
4112-13	Metal Machinist*	N	S
4113-11	Toolmaker*	N	D
4122-11	Metal Fabricator*	N	S
4122-15	Welder*	N	S*
4124-11	Sheetmetal Worker*	N	S
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S*
4212-11	Auto Electrician*	N	S*
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S*
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades* Electronic Instrument Trades*	N	S
4314	Electronic Equipment Trades*	N	S
4315	Business Machine Mechanic*	N	
4315-13			
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	S
4412-11	Fibrous Plasterer*	N	S
4414-11	Bricklayer*	N	S
4415-11	Solid Plasterer*	N	S
4431-11	Plumber*	N	S*
<b>FOOD TRADES</b>			
3322	Chef*	N	S*
4512-11	Baker*		na
4513-11	Cook	N	
4512-13	Pastrycook*	N	S
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		
4913-11	Binder and Finisher		
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S

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M = Shortage in metropolitan areas

D = Recruitment difficulties

M-D = Recruitment difficulties in metropolitan areas

E = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed

## Comments on trade specialisations

**Metal Fitter: WA:** shortages are especially for heavy duty fitters.

**Welder: WA:** shortages are most evident for coded welders highly skilled in specialist procedures.

**Motor Mechanic: WA:** shortages are particularly evident for truck and diesel mechanics.

**Auto Electrician: WA:** shortages are particularly evident for auto electricians experienced in working with heavy equipment in the mining industry.

**Electrician: WA:** shortages are evident for electricians with cabling licenses and data/communications experience.

**Plumber: WA:** shortages are especially evident for roof plumbers.

**Chef: WA:** in metropolitan areas, the shortage is restricted to some Asian cuisines, particularly Indian, Japanese and Thai, although more general shortages are evident in regional areas.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	TAS
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S
4112-13	Metal Machinist*	N	S
4113-11	Toolmaker*	N	S*
4122-11	Metal Fabricator*	N	S
4122-15	Welder*	N	S
4124-11	Sheetmetal Worker*	N	S
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades* Electronic Instrument Trades*	N	S
4314	Electronic Equipment Trades*	N	S
4315	Business Machine Mechanic*	N	S
4315-13	Mechanic*		S
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	S
4412-11	Fibrous Plasterer*	N	S
4414-11	Bricklayer*	N	S
4415-11	Solid Plasterer*	N	S*
4431-11	Plumber*	N	S
<b>FOOD TRADES</b>			
3322	Chef*	N	S
4512-11	Baker*		na
4513-11	Cook	N	
4512-13	Pastrycook*	N	S*
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		
4913-11	Binder and Finisher		
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	S
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	S

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M-D = Recruitment difficulties in metropolitan areas

E = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed

## Comments on trade specialisations in TAS

**Toolmaker: TAS:** Toolmaker is a very small occupation in Tasmania.

**Refrigeration and Airconditioning Mechanic:** na

**Solid Plasterer: TAS:** solid plastering is a very small occupation in Tasmania.

**Pastrycook: TAS:** shortages are particularly for specialist dessert chefs, specialist patisserie pastry cooks.

## Skill Shortage List – Trades

December 2004

ASCO	Occupation	AUST	NT
<b>ENGINEERING TRADES</b>			
4112-11	Metal Fitter*	N	S*
4112-13	Metal Machinist*	N	S
4113-11	Toolmaker*	N	na
4122-11	Metal Fabricator*	N	S*
4122-15	Welder*	N	S*
4124-11	Sheetmetal Worker*	N	S
<b>VEHICLE TRADES</b>			
4211-11	Motor Mechanic*	N	S
4212-11	Auto Electrician*	N	S
4213-11	Panel Beater*	N	S
4214-11	Vehicle Painter	N	S
<b>ELECTRICAL/ELECTRONICS</b>			
4311-11,13	Electrician*	N	S
4312-11	Refrigeration and Airconditioning Mechanic*	N	S
4313	Electrical Powerline Trades* Electronic Instrument	N	S
4314	Trades* Electronic Equipment	N	M-D,R
4315	Trades* Business Machine	N	S
4315-13	Mechanic*		S
<b>CONSTRUCTION TRADES</b>			
4411-11	Carpenter and Joiner*	N	S*
4412-11	Fibrous Plasterer*	N	S
4414-11	Bricklayer*	N	M*
4415-11	Solid Plasterer*	N	S
4431-11	Plumber*	N	S*
<b>FOOD TRADES</b>			
3322	Chef*	N	S
4512-11	Baker*		na
4513-11	Cook	N	S
4512-13	Pastrycook*	N	D
<b>PRINTING TRADES</b>			
4911-11	Graphic Pre-press Trades		
4912	Printing Machinist		
4913-11	Binder and Finisher		
<b>WOOD TRADES</b>			
4921-11	Wood Machinist*		na
4922-11	Cabinetmaker*	N	S
<b>OTHER TRADES</b>			
4931-11	Hairdresser	N	S
4942-11	Furniture Upholsterer*	N	na

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D = Recruitment difficulties

M-D = Recruitment difficulties in metropolitan areas

e = shortage easing over the next 12 months

S = State-wide shortage

R = Shortage in regional areas

R-D = Recruitment difficulties in regional areas

\* = See comments on specialisations

na = not assessed



## Comments on trade specialisations in NT

**Metal Fitter: NT:** shortages are especially evident for Metal Fitters with heavy duty and underground experience.

**Metal Fabricator: NT:** shortages are particularly evident for fabricators with new construction (setting and mark out skills) and aluminium and stainless steel experience.

**Welder: NT:** shortages are particularly for welders with TIG welding experience.

### **Refrigeration and Airconditioning Mechanic:**

**Carpenter: NT:** shortages are particularly evident for carpenters skilled in large scale construction projects.

**Bricklayer: NT:** shortages are evident for bricklayers skilled in large scale construction projects.

**Plumber: NT:** shortage is particularly apparent for plumbers skilled in the maintenance of existing domestic plumbing.