Australian Government

Department of Employment and Workplace Relations

Industry Employment Outlook

Electricity, Gas and Water Supply

August 2007

Labour Supply and Skills Branch
Labour Market Strategies Group

Electricity, Gas and Water Supply is the smallest employing industry in Australia (of a total of 17 industries[1]), employing 87 700 people (or 0.8 per cent of the total workforce) as at May 2007. While there is a constant demand for the utilities provided by the Electricity, Gas and Water industry, employment is affected by economic cycles and industry policies, especially deregulation of energy markets.

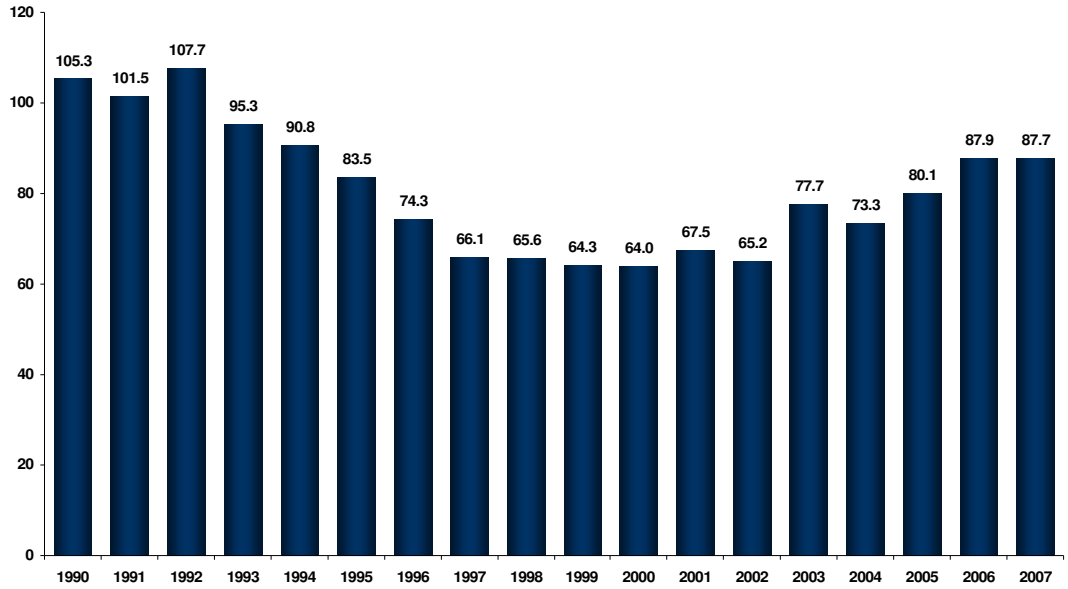
The industry is roughly divided into three sectors: Electricity Supply; Gas Supply; and Water Supply, Sewerage and Drainage Services.

The discussion below focuses on employment characteristics, trends and prospects in the Electricity, Gas and Water Supply industry, and highlights sectors where job growth is strongest. The analysis of characteristics includes workforce ageing, employment share by gender, educational profile, weekly earnings, average hours worked, regional and occupational employment.

Employment Growth

In recent years, employment in the Electricity, Gas and Water Supply industry has shown variable growth (see Figure 1). Employment in the industry fell sharply during the 1990s from a peak of 107 700 in Mary 1992 to a low of 64 000 in May 2000, a fall of 40.6 per cent. Employment has recovered somewhat in recent years. In the ten years to May 2007, the average annual growth rate has been 2.9 per cent. This average takes into account a trough period in the 1990's when employment decreased substantially.

Figure 1: Electricity, Gas & Water Supply - Employment Level ('000)
May 1990 to May 2007



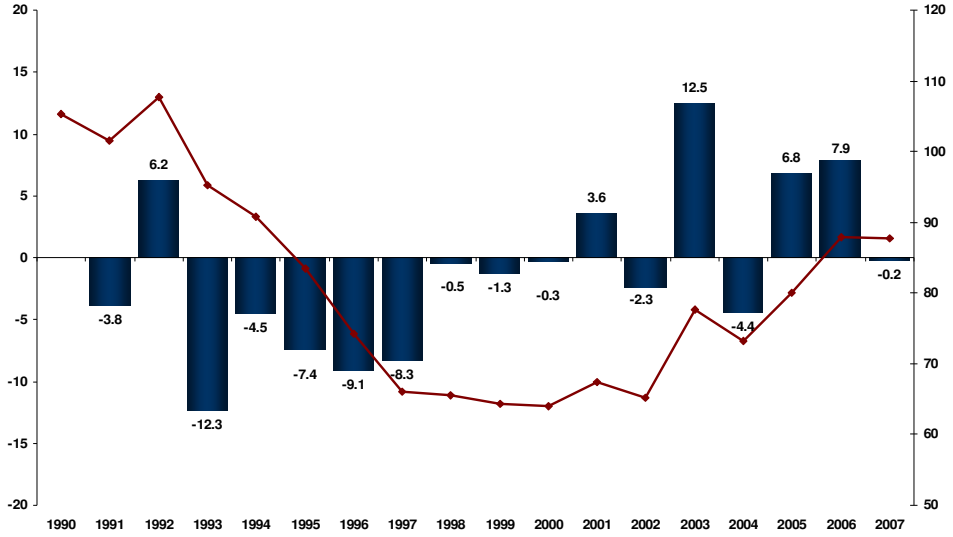
Source: ABS Labour Force Survey (DEWR Trend data)

[1] DEWR Industry Employment Outlooks use the Australian and New Zealand Standard Industrial Classification (ANZSIC) – 1 and 3 digits. An electronic copy of the ANZSIC guide is available from the Australian Bureau of Statistics (ABS) website (ABS cat. no. 1292.0) at <http://www.abs.gov.au>

Employment in the Electricity, Gas and Water Supply industry is influenced by the economic cycle, demand and supply factors within the domestic economy, and industry policies and longer term trends in the energy industry.

During the recessionary period of the early 1990s, there were falls in employment, particularly in the year to May 1993 (down by 12 300 – see Figure 2). As noted above, employment in Electricity, Gas and Water Supply decreased to a low of 64 000 in May 2000, the lowest level since the DEWR trended series began in 1986. Employment then rose to an eleven year high of 87 900 in 2006, and remained close to this level in May 2007.

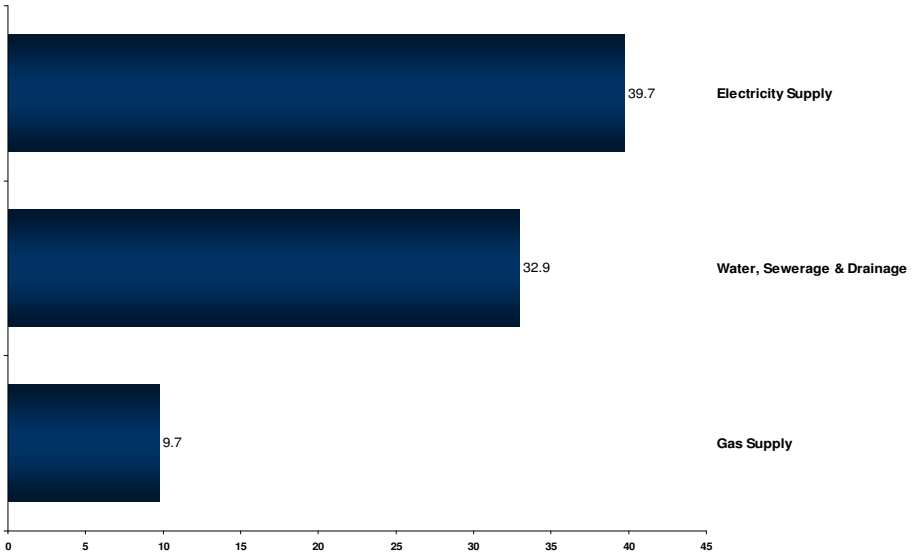
Figure 2: Electricity, Gas & Water Supply - Employment Level (line RHS) and Annual Change ('000) in year to May (cols LHS)



Source: ABS Labour Force Survey (DEWR trend data)

Figure 3 shows that Electricity, Gas and Water Supply employment is dominated by Electricity Supply, which accounted for 39 700 workers (or 48.2 per cent of the industry's employment) in May 2007. Water, Sewerage and Draining employed 32 900 (40.0 per cent) and Gas Supply 9700 (11.8 per cent).

Figure 3: Electricity, Gas & Water Supply - Employment Level ('000) - May 2007



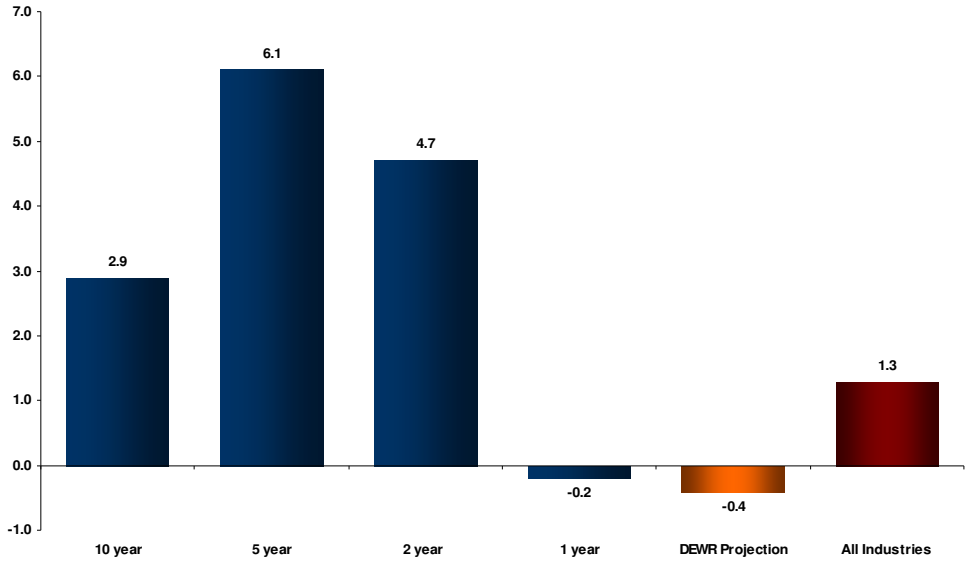
Source: ABS Labour Force Survey (DEWR trend data)

Employment Prospects

The Department of Employment and Workplace Relations (DEWR) has projected slight employment losses for the Electricity, Gas and Water Supply industry for the next five years, although it should be noted that some risk is attached to this outlook given the long-term trends.

In the five years to 2011-2012, employment in the Electricity, Gas and Water Supply industry is expected to decrease at an average rate of 0.4 per cent per annum, which equates to a loss of around 1700 jobs (see Figure 4). This compares with an average annual growth rate of 1.3 per cent across all industries over the same period.

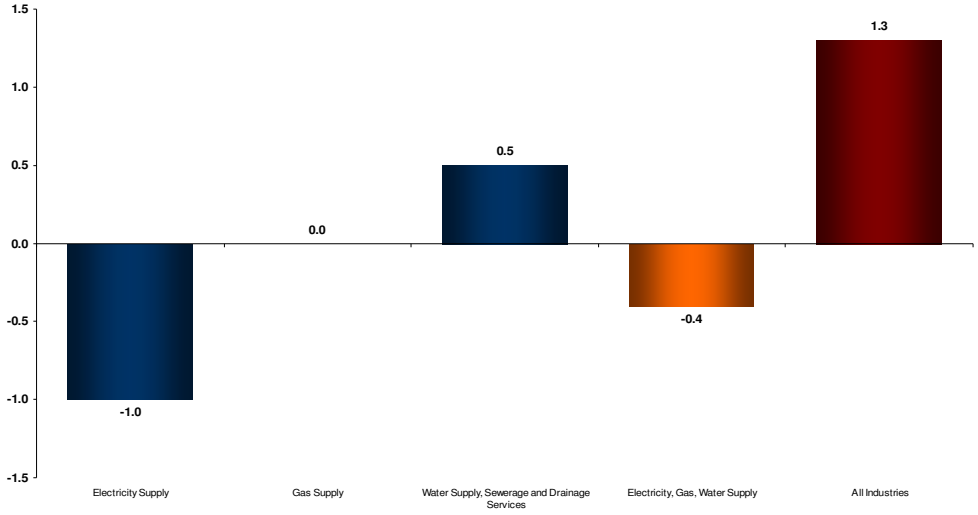
Figure 4: Electricity, Gas & Water Supply - Recent and Future Employment Growth (% pa), Years to May 2007 (past) and 5 Years to 2011-12 (projected)



Source: ABS Labour Force Survey (DEWR trend data); DEWR projections

Employment growth projections for sectors in the Electricity, Gas and Water Supply industry are varied (see Figure 5). Water Supply, Sewerage and Drainage Services is projected to have the strongest employment growth of all the industry sectors (up by 0.5 per cent per annum) while Electricity Supply is expected to decrease (down by 1.0 per cent per annum). Meanwhile employment in Gas Supply is predicted to remain steady.

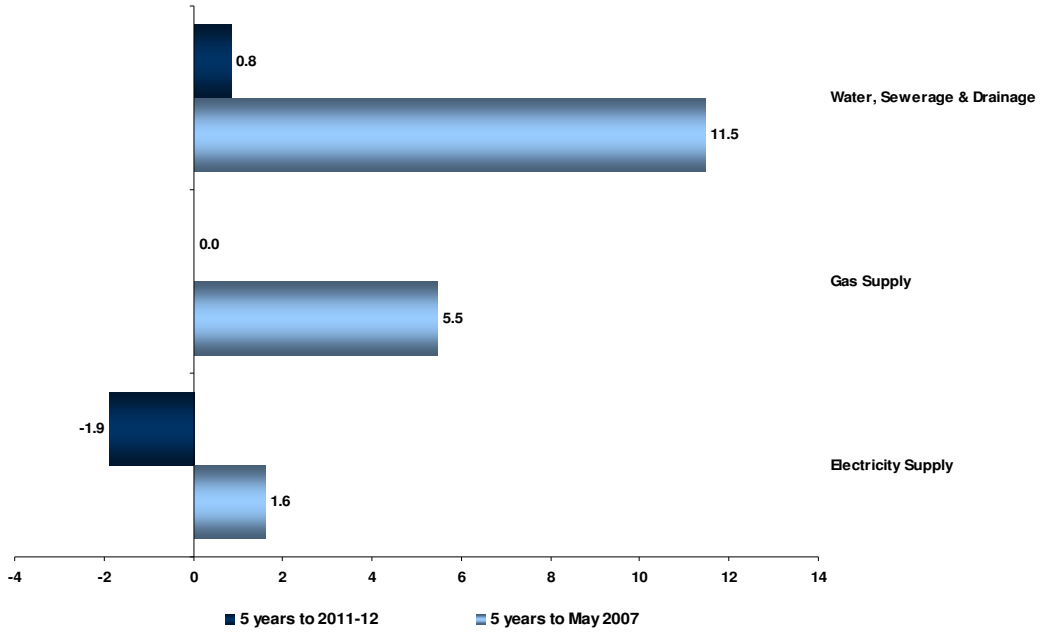
Figure 5: Electricity, Gas & Water Supply Sectors - Projected Employment Growth (% pa) to 2011-12



Source: ABS Labour Force Survey (DEWR trend data); DEWR projections

As Figure 6 shows, in the five years to May 2007, the largest job gains have been in Water Supply, Sewerage and Drainage Services (up by 11 500), and Gas Supply (5500). In the five years to 2011-12, projected employment growth across the sectors will be varied. Employment for Water, Sewerage and Draining is projected to continue to increase, albeit at a slower pace than in the past (up by 800). Employment in the Electricity Supply sector is projected to decline (down by 1900) while in Gas Supply employment is projected to remain steady.

Figure 6: Electricity, Gas & Water Supply Sectors - Recent and Future Employment Growth ('000), 5 years to May 2007 (past) and to 2011-12 (projected)

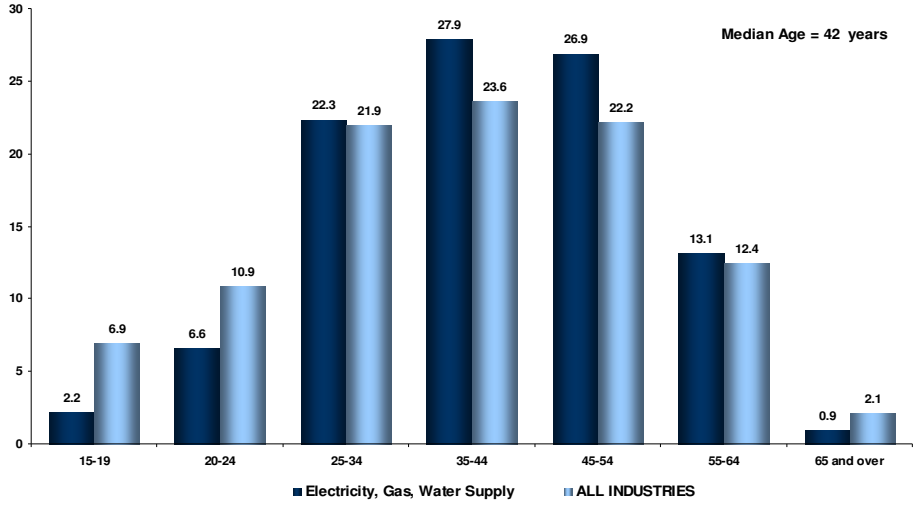


Source: ABS Labour Force Survey (DEWR trend data); DEWR projections

Workforce Ageing

The Electricity, Gas and Water Supply industry has an older than average workforce relative to all industries, with a median age of 42 years. More than two fifths (40.9 per cent) of the industry's workforce was aged 45 years and over in 2006, with a large proportion of workers aged 45 to 54 years (26.9 per cent - see Figure 7). The Electricity, Gas and Water Supply industry has a below average share of younger workers aged 15 to 19 years (2.2 per cent) and 20 to 24 years (6.6 per cent).

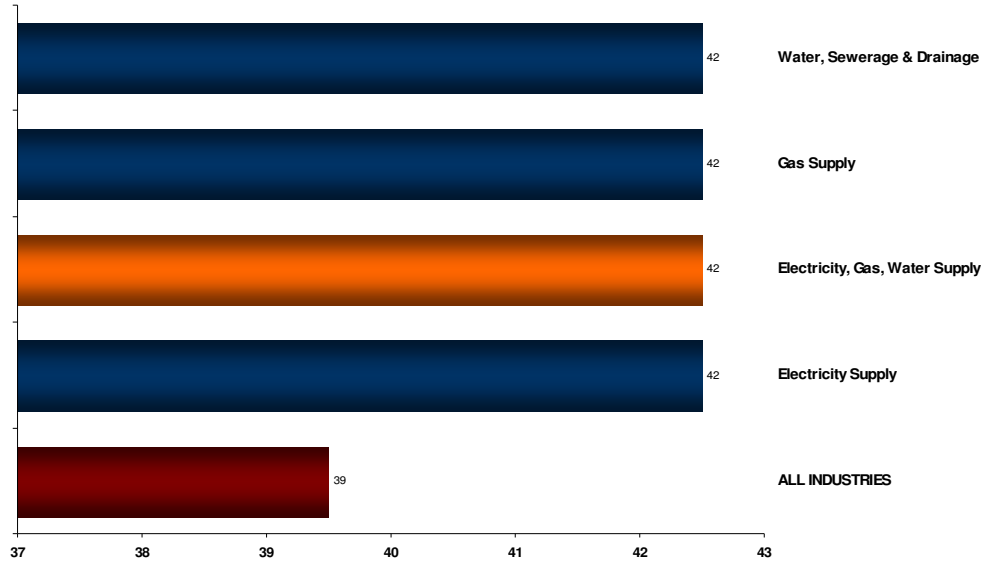
Figure 7: Electricity, Gas & Water Supply - Employed by Age compared with All Industries 2006 (% share of employment)



Source: ABS Labour Force Survey

The age profile of the Electricity, Gas and Water Supply industry is uniform with a median age of 42 years across all sectors of the industry in 2006 (see Figure 8). In comparison, the median age for all industries was 39 years.

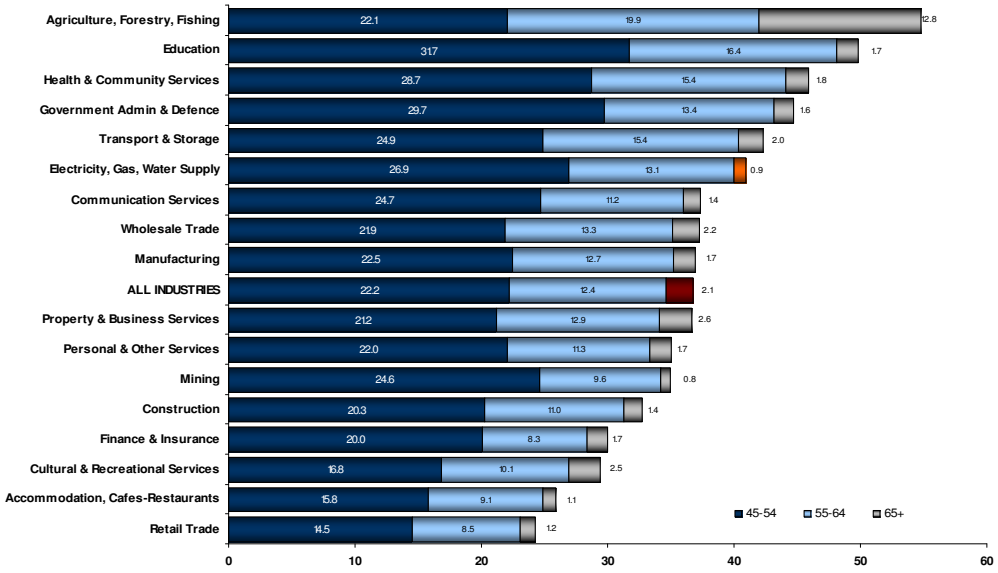
Figure 8: Electricity, Gas & Water Supply Sectors - Median Age in years – 2006



Source: ABS Labour Force Survey

The Electricity, Gas and Water Supply industry has a relatively high share of workers aged 45 years and over. In 2006, four in ten workers (40.9 per cent) in the industry were aged 45 years and over, compared to 36.7 per cent for all industries (see Figure 9). The bulk of the mature aged workforce were aged 45 to 54 years (26.9 per cent) while merely 0.9 per cent of Electricity, Gas and Water Supply workers were aged 65 years and over.

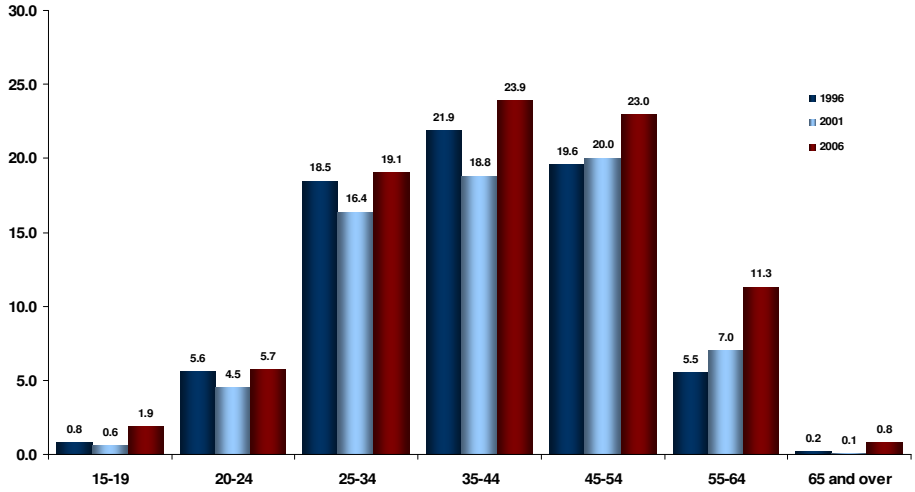
Figure 9: Electricity, Gas & Water Supply - Mature age workers (45+ years) - % share of employment



Source: ABS Labour Force Survey

In the ten years to 2006, all of the age groups in the Electricity, Gas and Water Supply industry experienced employment growth (see Figure 10). Workers aged 55 to 64 years experienced the strongest employment growth (up by 105.5 per cent). This equates to 42.6 per cent of the total industry growth since 1996, making those aged 55 to 64 years, key drivers of growth. Like many industries, Electricity, Gas and Water Supply has not experienced a large influx of workers in the younger age groups (16 to 19 years and 20 to 24 years), thus making it more vulnerable to workforce ageing.

Figure 10: Electricity, Gas & Water Supply – Employment by Age ('000) 1996, 2001, 2006

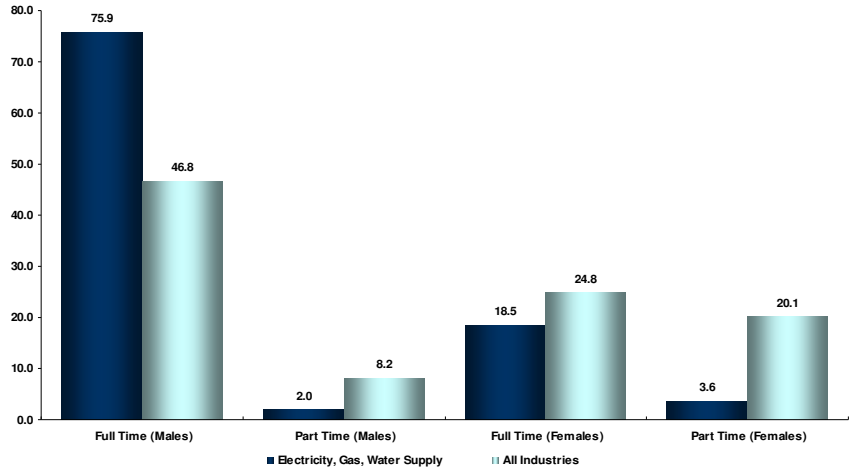


Source: ABS Labour Force Survey

Employment by Gender and Full-time/Part-time

The Electricity, Gas and Water Supply industry workforce is made up of predominantly male full-time workers (75.9 per cent of industry employment - see Figure 11). In comparison, female employment, both full-time (18.5 per cent) and part-time (3.6 per cent), was below the average for all industries. Also of interest, part-time employment (5.6 per cent) was eclipsed by full-time employment (94.4 per cent) in the Electricity, Gas and Water Supply industry. The disparity can be accounted for in part by the nature of work and work hours within Electricity, Gas and Water Supply.

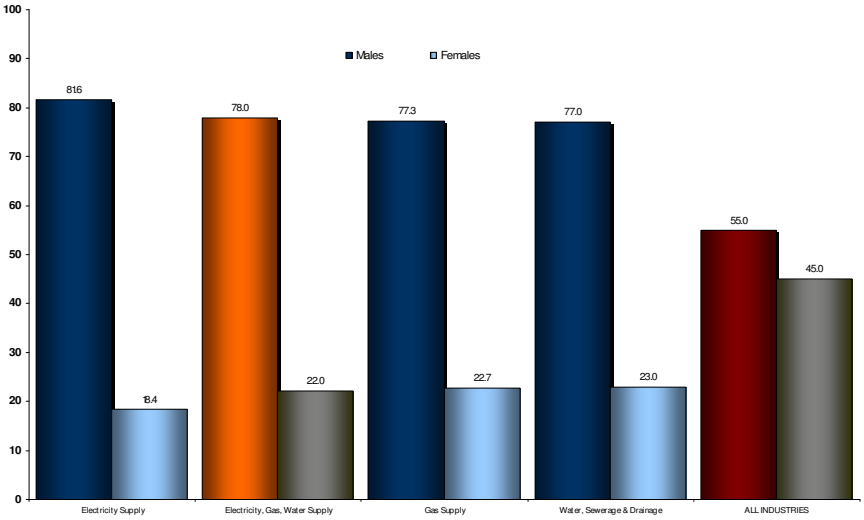
Figure 11: Electricity, Gas & Water Supply - Employment by Gender Full-time / Part-time (% share)



Source: ABS Labour Force Survey

As shown in Figure 12, employment is skewed towards males across all sectors within the Electricity, Gas and Water Supply industry. In the year to November 2006, Electricity Supply employed the highest proportion of males (81.6 per cent). Meanwhile, Water, Sewerage and Drainage had the smallest proportion of males (77.0 percent) but this proportion still remains higher than the average for all industries (55.0 per cent).

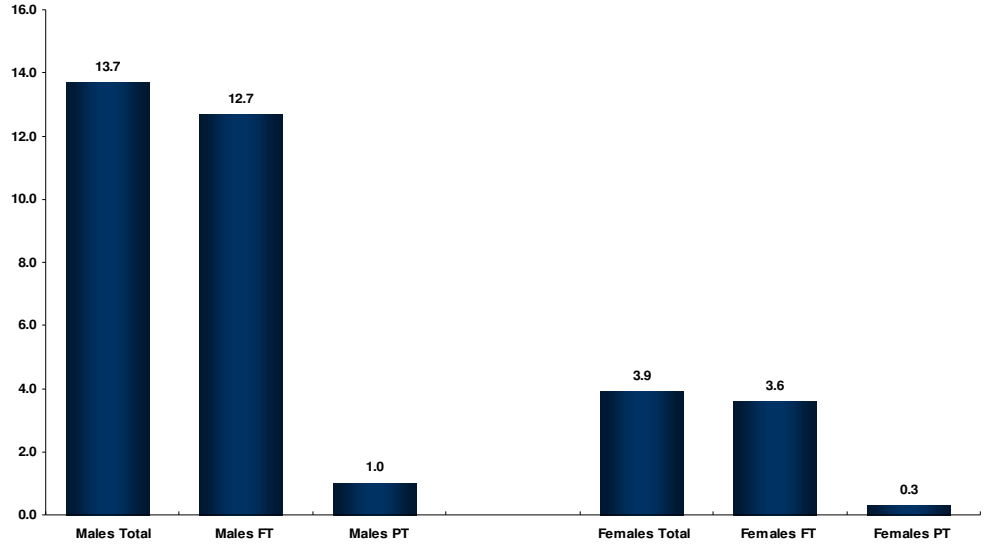
Figure 12: Electricity, Gas & Water Supply Sectors - % Employment by Gender, Year to November 2006



Source: ABS Labour Force Survey

In the five years to the year to May 2007, employment growth in Electricity, Gas and Water Supply was driven by an increase of male workers (up by 13 700), with nearly all of this growth attributable to male full-time workers (12 700 - see Figure 13). Employment has also risen for females over the same period, albeit by much less (up by 3900).

Figure 13: Electricity, Gas & Water Supply - Employment Growth (five years) by Gender and Full-time /Part-time, year to May 2002 and 2007 ('000)

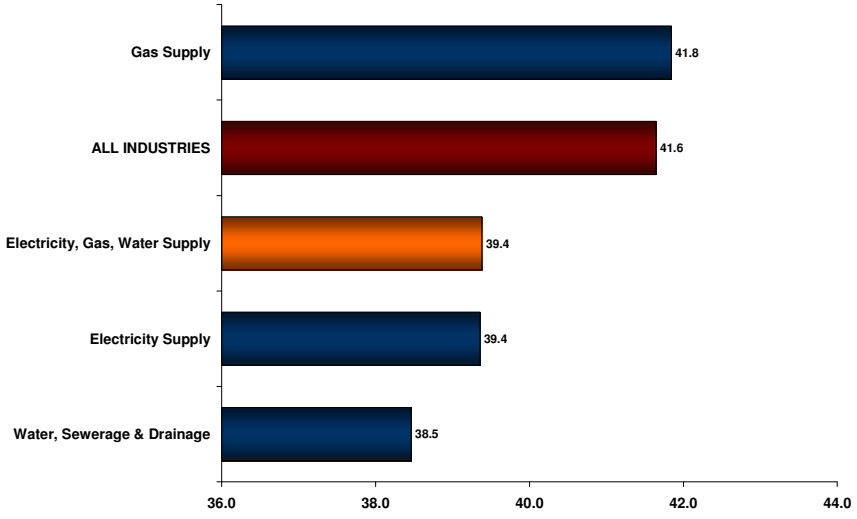


Source: ABS Labour Force Survey

Hours Worked

Figure 14 shows that average full-time weekly hours in the Electricity, Gas and Water Supply industry were lower than the average for all industries (39.4 hours compared with 41.6 hours for all industries). Workers in the Gas Supply sector had the highest weekly hours (41.8 hours). In contrast Water, Sewerage and Drainage had the lowest average weekly hours (38.5 hours).

Figure 14: Electricity, Gas & Water Supply Sectors - Average Full-Time Weekly Hours in 2006



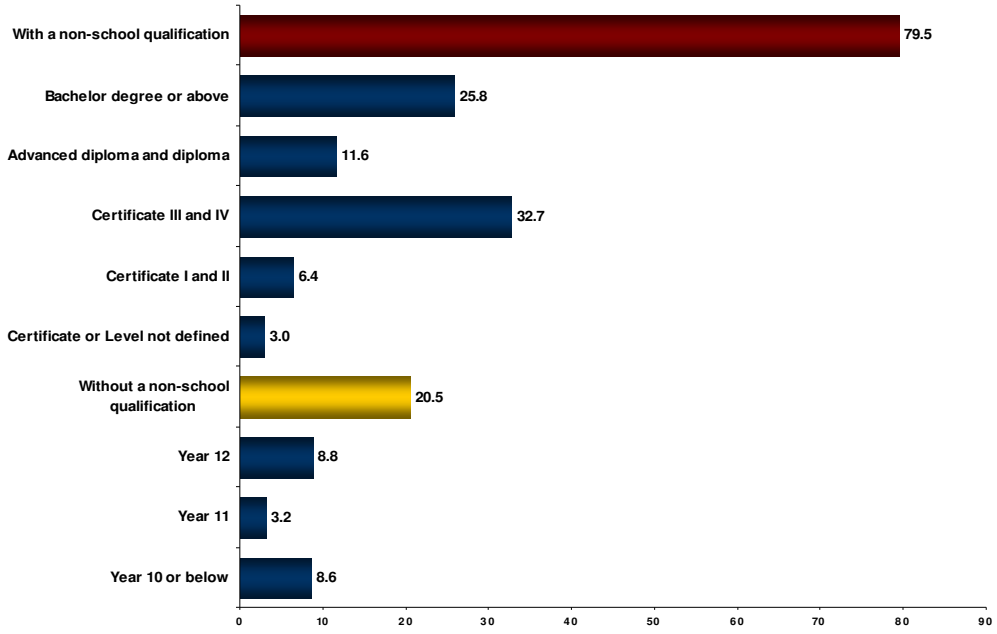
Source: ABS Labour Force Survey

Employment Characteristics

Educational Profile

Electricity, Gas and Water Supply generally has a high educational profile however it also plays a vital role in providing job opportunities for low skilled workers. In May 2006 (latest data), 79.5 per cent of workers in the Electricity, Gas and Water Supply industry had completed a non-school qualification (see Figure 15). More than one quarter (25.8 per cent) of Electricity, Gas and Water Supply workers who held a non-school qualification had a Bachelor degree or above, while an even larger proportion (32.7 per cent) held a Certificate III or IV qualification, attributable to those with trade qualifications. Meanwhile, 20.5 per cent of workers in the industry were without a non-school qualification, with 8.6 per cent achieving only a Year 10 or above educational attainment.

Figure 15: Electricity, Gas & Water Supply - Educational Attainment - Share of Employment (%) at May 2006



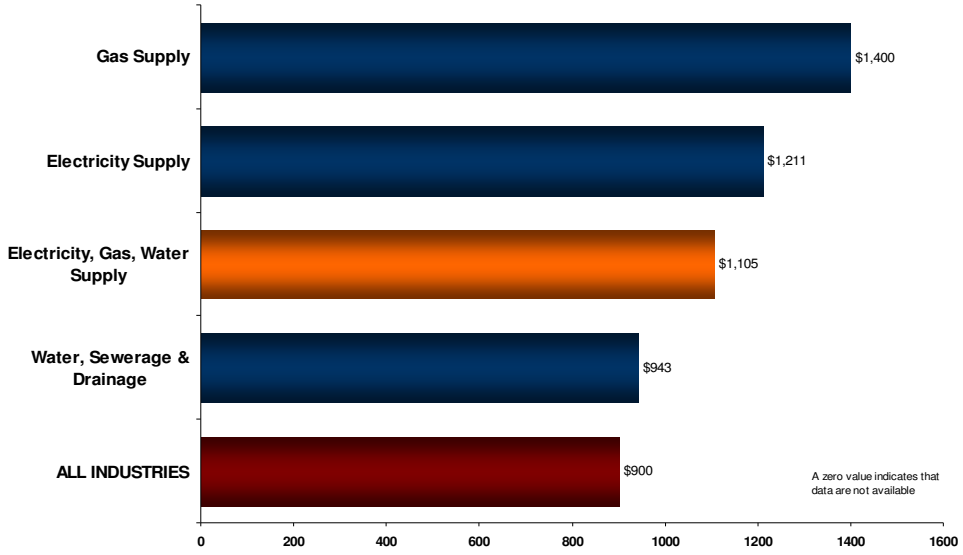
Source: ABS Education and Work, cat. no. 6227.0

Median Weekly Earnings

The median weekly earnings of full-time Electricity, Gas and Water Supply employees in May 2006 were $1105, which were 22.8 per cent higher than for all industries ($900 - see Figure 16). The median full-time weekly earnings for all sectors were higher than for all industries. Workers in the Gas Supply sector earned the most ($1400), followed by Electricity Supply workers ($1211). The higher than average earnings for workers in the industry can be explained by the higher skills needed for the majority of occupations in the Electricity, Gas and Water Supply industry, particularly trade and engineering professionals.

- These earnings data are for full-time employees, and do not reflect the earnings of self-employed or contract workers.

Figure 16: Electricity, Gas & Water Supply - Median weekly earnings (full-time and before tax) at May 2006

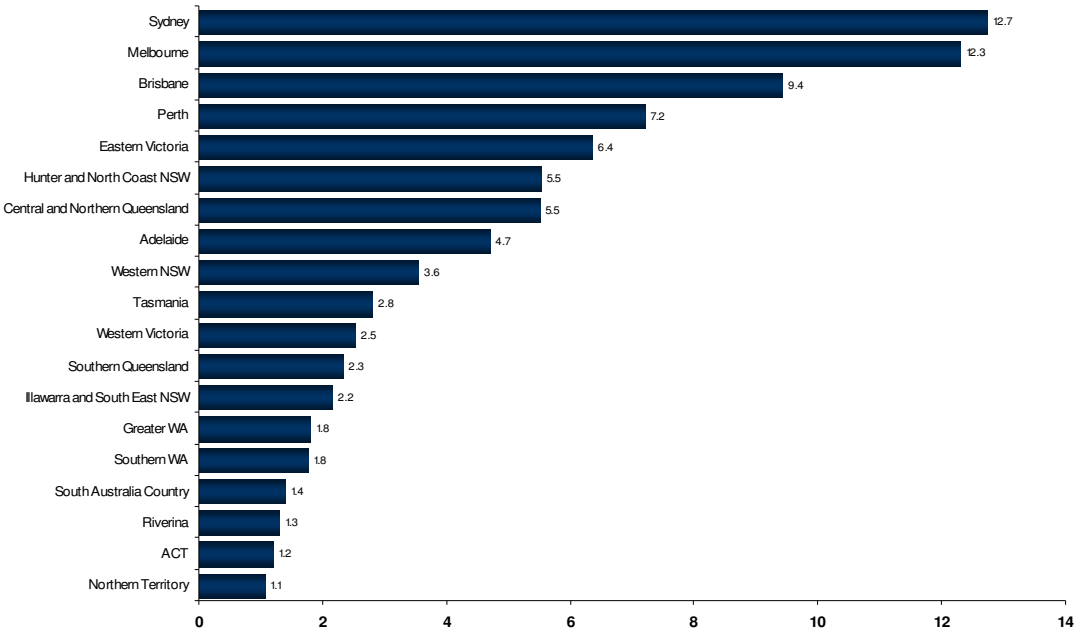


Source: ABS Employee Earnings, Benefits and Trade Union Membership, cat. no. 6310.0

Regional Employment

Employment in the Electricity, Gas and Water Supply industry is generally correlated with population size. In 2006, Sydney on average employed the largest number of workers (12 700) followed by Melbourne (12 300), Brisbane (9400) and Perth (7200). At the opposite end of the spectrum, employment was lowest in the ACT (1200) and the Northern Territory (1100).

Figure 17: Electricity, Gas & Water Supply - Main Employing Regions ('000) 2006

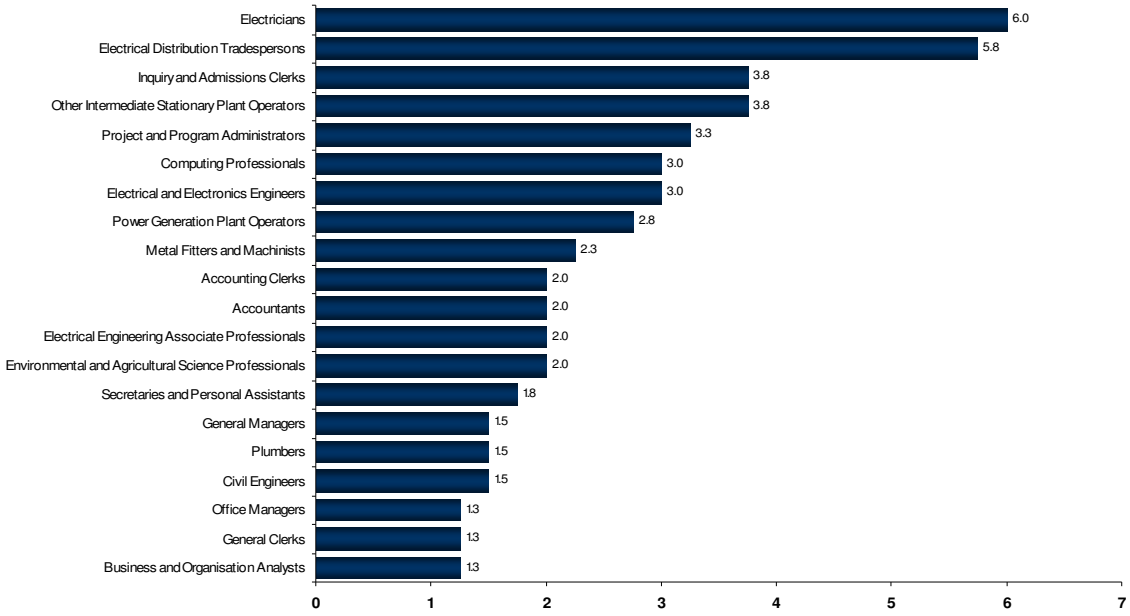


Source: ABS Labour Force Survey

Main Employing Occupations

It is useful, for job seeking and career advice, to identify key occupations within an industry[2]. Occupations in the Electricity, Gas and Water Supply industry are generally spread across the Professions and Trades, in addition to a variety of administrative positions. The largest employing occupations in the Electricity, Gas and Water Supply industry were Electricians (6000), followed closely by Electrical Distribution Tradespersons (5800 - see Figure 18).

Figure 18: Electricity, Gas & Water Supply - Top 20 Employing Occupations – Year to February 2007 ('000)



Source: ABS Labour Force Survey

[2] Occupations are classified according to the Australian Standard Classification of Occupations (ASCO) 2nd Edition (four digit unit groups), with some modifications (ABS Cat. No. 1220.0).