

<b>Chemical Engineer</b>	<b>Victoria</b>
<b>ANZSCO Code: 2331-11</b>	April 2009
<b>Labour market rating:</b>	Recruitment Difficulty
<b>Comment:</b> Positions requiring a high degree of specialisation were difficult to fill	

### Occupational demand

Chemical engineers design and prepare specifications for chemical process systems and the construction and operation of commercial-scale chemical plants, and supervise industrial processing and fabrication of products undergoing physical and chemical changes. The Australian Bureau of Statistics (ABS) 2006 census data indicate the labour market in Victoria is small, with approximately 432 people employed in this profession. Chemical engineers in Victoria work across a diverse range of industries but nearly half are employed in manufacturing (primarily basic chemical and chemical product manufacturing) and nearly a third work in the professional, scientific and technical services sector. The Australian Industry Group *Performance of Manufacturing Index* (PMI) for April 2009, indicates manufacturing activity as a whole decreased in Victoria for the eleventh successive month. A February 2009 report from Engineers Australia indicates that nationally the property and business services sector also contracted in the latter half of 2008. Recent allocated funding by the State Government towards a number of water projects across Victoria (including the desalination plant at Wonthaggi) may see demand for chemical engineers increase in this sector. The Victorian Manufacturing Plan (November 2008) is providing \$122.7million in initiatives to support the whole manufacturing sector.

### Occupational supply

The most common university engineering qualification is a four year bachelor degree which meets the requirements for professional engineer status. DEEWR estimates about 166 people completed an entry level degree in chemical engineering in Victoria in 2007, representing an increase of 43 per cent over 2006. According to the Graduate Careers Council of Australia December 2008 survey, 91 per cent of chemical engineering graduates nationally are in full-time employment. There are no separate data on net immigration of chemical engineers to Victoria from overseas.

### Employer and industry comments/current labour market

Few vacancies for chemical engineers were advertised in the six months leading to this report, so a number of employers were cold canvassed for their experiences. Contacts were from different industry sectors including water; petrochemical; and consultancy services; as well as recruitment agencies. A small sample of recently advertised positions revealed that approximately 40 per cent of chemical engineer vacancies were filled. On average, there were 28 applicants per vacancy, of which just over 1 was considered suitable for each position. Consultancy firms surveyed did not have any difficulty filling their vacancies (possibly as they work on projects across a number of different areas) and did not believe there was a shortage. In addition, anecdotal evidence suggests some large consultancy firms have retrenched chemical engineers, particularly those with less experience. Some contacts indicated that the water industry in Victoria is reasonably small and that employers were specifically seeking people with Victorian water industry experience. In addition, the salaries offered by some employers (eg. water authorities) are not as attractive as those available in other settings. These factors may have reduced the number of suitable applicants. Contacts suggested while there may appear to be sufficient number of chemical engineers, positions are hard to fill as employers are now seeking applicants with very industry-specific skill sets and experience. Some employers stated there was no shortage of junior engineers but that those with 10-20 years experience were in short supply.

### Labour market outlook

Government initiatives may increase demand for chemical engineers – particularly in the water and waste treatment industries. However recruitment difficulties are expected to continue for the next six months.