ANZSCO 2333-11 Victoria
Electrical Engineer
February 2017

Current labour market rating
No Shortage

Previous labour market rating (February 2016)
Recruitment Difficulty (Senior Roles)

Comments

The survey found that Victorian employers were able to fill the majority of vacancies with qualified, skilled and experienced electrical engineers.

Survey results

- The Department of Employment 2017 Survey of Employers who have Recently Advertised (SERA) found that 69 per cent of vacancies were filled from an average of 47.2 applicants per vacancy, with an average of 2.0 applicants considered suitable by employers.
- The surveyed vacancies were from a broad range of industry sectors including construction and manufacturing, renewable resources, transport and utilities. Vacancies covered numerous electrical engineering roles within these industries including design, development, project management, maintenance, optimisation and reliability engineering.
- Vacancies which remained unfilled at the time of survey were largely within emerging industries, particularly in the renewable energy sector (wind power plants) and automation. Employers cited applicants’ lack of specialist experience and the location of vacancies in regional areas as factors contributing to unfilled vacancies.
- Employers considered almost two thirds of all qualified applicants unsuitable due to a lack of relevant experience.
- Skill sets were largely considered to be sector specific and non-transferrable between sectors. For example, an applicant with electrical engineering experience in transport infrastructure may be considered unsuitable for a role within industrial automation.
- Some employers specified a desired duration of relevant experience, with intermediate roles requiring a minimum of three to eight years’ experience and senior roles requiring over ten years’ experience.

Employer requirements

- All employers required applicants to hold a bachelor degree as the minimum qualification level.
- The majority of employers preferred applicants with strong interpersonal and communication skills who were able to effectively liaise with internal and external stakeholders.
- Half of surveyed employers desired an applicant with computer skills and experience with AutoCAD.
- Most employers considered an understanding of the Victorian state electrical regulatory standards, relevant to their advertised vacancy, to be essential.
- Employers typically required applicants to have design and documentation skills. Due to the limited transferability of such skills across industry sectors, employers required the skills to be established and refined within an industry sector relevant to the vacancy.
- Familiarity with Supervisory Control and Data Acquisition architecture, including the ability to install, commission, test and maintain Programmable Logic Controllers software was considered important by almost half of surveyed employers.
- Most employers preferred applicants who were able to think strategically and capable of working either autonomously or as part of a multidisciplinary team. Employers also sought applicants with a commitment to quality outcomes, including safety in design.

**Demand and supply trends**

- Australian Bureau of Statistics (ABS) 2011 Census data shows that electrical engineers are employed in three main industries: professional, scientific and technical services (31.9 per cent); manufacturing (22.3 per cent); and electricity, gas, water and waste services (19.9 per cent). Electrical engineers working in the professional, scientific and technical services industry typically provide consulting services to other industries, such as construction and mining.
- Demand for electrical engineers in Victoria is largely driven by activity within the manufacturing industry and the electricity services sector.
- Data from the ABS for the December 2016 quarter indicates that activity in the Victorian electricity services sector has been in decline since September 2014.
- Capital expenditure within the manufacturing industry (a broad indicator of industry activity levels) is slightly lower than the ten year average, having increased 24 per cent since the ten year low in 2014. Despite a long term downward trend in the manufacturing industry, the contribution of the industry to the Gross State Product (GSP) of Victoria has grown by an average of one per cent per year since 2014.
- The Department of Employment Internet Vacancy Index (IVI) for February 2017 shows that the number of online vacancies for electrical engineers in Victoria remains low. Although vacancy numbers have increased on a monthly basis from November 2015, this short period of growth has not offset a longer term trend of ongoing decline over the past five years.
- Entry into this occupation is through an electrical engineering related bachelor degree. The latest available data from the Australian Government Department of Education and Training for Victorian bachelor degree courses related to the electrical engineering occupation show that there were 335 course completions in 2015, up from 295 completions in 2014. While this figure has remained fairly stable since 2011, the number of course completions is significantly lower than the peak of the past ten years, where 994 course completions were recorded in 2006.

---

1. ABS 2011 Population Census Data
2. ABS, cat. no. 8762.0, Engineering Construction Activity, Australia: Table 17. Value of Work Yet To Be Done, by Sector, Victoria, Original, February 2016, 12 month moving average
3. ABS. cat. no 5625.0 Private New Capital Expenditure and Expected Expenditure, Australia: Table 7B. Actual and Expected Capital Expenditure by Industry - Victoria:Current Prices $m
4. ABS, cat. no. 5220.0 Australian National Accounts: Table 3. Expenditure, Income and Industry Components of Gross State Product, Victoria, Chain volume measures and current prices
5. Department of Employment, Internet Vacancy Index, March 2016, 12 month moving average
6. Department of Education and Training, Higher Education Student Data Collection, 2015, customised tables