

# Career Centre fact sheet

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## Careers in oil and gas

The Australian oil and gas industry offers career opportunities for highly skilled individuals willing to work away from home in remote environments. Western Australia is host to both onshore and offshore oil and gas projects. Two of the three operating Liquefied Natural Gas (LNG) plants (as at March 2014) in Australia are based in Western Australia's Pilbara region. The industry places a high priority on safety both from a practical and behavioural perspective. The diversity of projects means a variety of skilled labour will be in demand throughout the various project phases such as exploration, design, construction, extraction and processing. It is estimated that there are approximately 40 000 people working directly in Western Australia's oil and gas industry. According to the 2011 ABS Census, women comprised more than 25% of Western Australia's oil and gas workforce. Approximately 20% of the current oil and gas industry workforce is aged 50 years and over. Over the next two to three years, construction of a number of new oil and gas projects will be completed and they will commence production. This will bring the number of operating LNG plants in Australia to ten.

### Professionals

In the oil and gas industry, professionals require a university degree, often in scientific subjects such as petroleum or reservoir engineering, process or chemical engineering, electrical engineering, geology, geophysics and environmental sciences. As a result, science, technology, engineering and maths subjects are important for school students thinking of a professional career in the oil and gas industry. Other professional roles required across the various phases of the life cycle of a project include management, finance and accounting, law, information technology, logistics, health and safety, human resource management, and project management.

### Tradespeople and technicians

A relatively broad range of tradespeople can be found in the oil and gas industry. Tradespeople with dual qualifications (often electrical/instrumentation) can find careers in plant operations and plant maintenance, such as process plant technicians who are highly skilled operators working on offshore and onshore oil and gas projects. Remote operations often require dual or multi-skilled employees, responsible for operating and maintaining the plant and equipment.

Process plant technicians often complete a Certificate II in Process Plant Operations and further studies in Certificate III Process Plant Operations and Certificate IV in Plant Technology under a traineeship at the Australian Centre for Energy and Process Training located at Henderson, south of Fremantle.

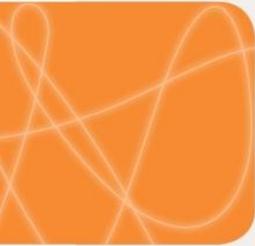
Offshore sites also require employees with specialist skills such as deep-sea divers, helicopter pilots, crane operators, maritime crews and remotely operated vehicle operators.

### Phases of oil and gas projects and required skills

- **Exploration phase**

The exploration phase typically involves geologists/geophysicists, seismic interpreters, and drilling personnel. Once a field is considered to be financially viable and the final investment decision has been made the project moves into the design phase.





- **Design phase**

During the design phase the best method(s) of maximising access to the oil or gas reserves is considered, along with the best method for processing the extracted products. Roles that are involved in this phase include facility design and construction engineers, process/chemical engineers, project engineers, safety and risk engineers, petroleum and reservoir engineers.

- **Construction phase**

The construction phase skill requirements will depend on the type of operation. Onshore construction infrastructure will require civil and structural engineers, trade skills (metal, electrical and mechanical trades), concreters, mobile crane operators, and riggers and scaffolders.

- **Production phase**

Once a project has been built the operation or production phase begins and the oil or gas is extracted and processed. The roles required during this phase include process operators and technicians, instrumentation technicians/engineers, multi-skilled tradespeople and process/chemical engineers.

### **Non-technical roles**

A wide range of non-technical roles are required to ensure the safe, efficient and productive operation of on and off-shore oil and gas facilities and includes health and safety support, administrative roles, catering and cleaning.

### **How do I get into the oil and gas industry?**

Work opportunities will depend on your skills and experience, especially in trades such as electrical, instrumentation, fitting, welding and mechanical. To be considered for a traineeship or apprenticeship in the oil and gas industry it is useful to have prior work experience (although not necessarily in the oil and gas industry).

The Australian Petroleum Production and Exploration Association (APPEA) is the oil and gas industry's peak national employer group for the upstream oil and gas industry. Visit [appea.com.au](http://appea.com.au) for further information. The Australian Workforce and Productivity Agency has recently completed a Resources sector skills needs 2013 study that has valuable data on the sector and workforce projections to 2018. For more details on this report go to [awpa.gov.au/our-work/sector-specific-skill-needs/resource-sector-skills/Pages/default.aspx](http://awpa.gov.au/our-work/sector-specific-skill-needs/resource-sector-skills/Pages/default.aspx).

### **Useful websites**

- [cciwa.com](http://cciwa.com) - Energy Apprenticeships Group.
- [peopleforthefuture.com.au](http://peopleforthefuture.com.au) - provides detailed information on occupations, pathways and advice on how to find work in the resources sector.
- [miningoilgasjobs.com.au](http://miningoilgasjobs.com.au) - a comprehensive overview of the mining, oil and gas industries in Australia
- [oresomeresources.com/resources](http://oresomeresources.com/resources) - provides free educational resources and teacher professional development to assist teaching and learning about minerals and energy in Australia.

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