# Position Details

## Research Projects- CSOF3

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| The following information is for applicants |
| Advertised Job Title | Mechanical Engineer  |
| Job Reference | 95003 |
| Tenure | Indefinite Full-time |
| Salary Range | AU$68,148 - AU$77,459 per annum (pro-rata for part-time)plus up to 15.4% superannuation |
| Location(s) | Pullenvale, QLD |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents
 |
| Position reports to the | Team Leader, Hydrogen and Gasification Technologies |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact David Wong via email at David.Wong@csiro.au or phone +61 7 3327 4145, mobile +61 434 483 526. |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work.

The Thermal and Electrochemical Technologies (TET) Group focuses on research in areas such as hydrogen generation, storage and transport; enabling a circular economy including supporting the application of biomass/waste streams to energy and other value-added products; combustion engines with alternative/low-carbon fuels; and so forth. The TET Group covers research staff working across a number of sites at CSIRO, including Pullenvale, Clayton and Newcastle.

The *Mechanical Engineer – Hydrogen and Gasification Technologies* has a practical role in the development, construction and operation of pilot-scale manufacturing / fabrication processes, the development and construction of specialist experimental facilities, the development of experimental procedures and the operation of experimental facilities, to deliver key components of major energy research projects at CSIRO Pullenvale site.

The role is part of a dynamic team of researchers, including research scientists and engineers, specialist trades, engineering, digital, and laboratory facilities experts.

### Duties and Key Result Areas

* Work with research scientists and engineers to help design, construct, maintain and operate bench, pilot and large-scale high pressure and temperature experimental facilities – including fuel processing and gasification reactors, reformers, membrane reactors, and gas compression systems.
* Hands-on, practical operation and maintenance of pilot-scale materials fabrication facilities, including tube-work preparation, coating processes, post-fabrication, record-keeping, and quality assurance and control (QA/QC) processes.
* With limited supervision, optimise, design and commission new processes or apparatus by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring some innovation. This includes pilot-scale materials fabrication and quality assurance processes.
* Maintain and operate general laboratory equipment, such as gas analysers, furnaces, ovens, sample preparation equipment, gas bottles changeovers, etc.
* Support the development and modification of software-based control systems for experimental facilities, as required.
* Prepare samples for experimental work, including metals/alloys, biomass, waste or other materials.
* Analysis of sample materials, such as particle size measurements, mechanical testing, STA, SEM/EDX and XRD, as required.
* Manage workflow amongst competing tasks.
* Assist staff in maintaining a high standard of housekeeping and cleanliness in laboratory and process bay areas.
* Respond courteously and efficiently to requests for your services.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team and business unit to carry out tasks that support CSIRO’s scientific objectives.
* Have awareness of, and adhere to, relevant occupational health, safety and environment issues.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Relevant degree in Mechanical Engineering with demonstrated experience in a mechanical, instrumentation, materials, manufacturing, applied science, chemical processes, or equivalent.
2. Some experience working with hand and power tools.
3. Some knowledge of both additive and subtractive manufacturing processes.
4. Some experience in design, fabrication and commissioning of mechanical systems.
5. Some experience with (computer aided design) CAD in detailed component development & prototyping.
6. Sound knowledge of PC based applications for word processing, spread sheeting and database management.
7. Demonstrated ability to work independently and follow instructions safely.
8. Have a flexible approach to problem solving under general direction.
9. Sound knowledge of, and commitment to, OHS policies.
10. Current driver’s licence.

## **Desirable**

1. A current forklift license or willingness to obtain one.
2. Possess some laboratory-based experimental skills, including some expertise in laboratory instrumentation and analytical techniques.
3. Experience with software applications – SolidWorks and LabVIEW.

## **Required Competencies**

* **Teamwork and Collaboration:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and CSIRO [Energy](https://www.csiro.au/en/research/technology-space/energy) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted