# Position Details

## Research Projects – CSOF4 or CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Electrical Engineer – Lithium Battery Technology |
| Job Reference | 79556 |
| Tenure | Indefinite  Full time |
| Salary Range | **Level 4:** AU$87,068 to AU$98,504 pa + up to 15.4% superannuation  **Level 5:** AU$102,724 to AU$111,165 pa + up to 15.4% superannuation  Applications are invited across two capability levels and the successful candidate will be appointed at the level commensurate with their skills and experience. |
| Location(s) | Clayton, VIC |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Position reports to the | Research Team Leader |
| Client Focus – Internal | 70% |
| Client Focus – External | 30% |
| Number of Direct Reports | None |
| Enquire about this job | Contact Dr Thomas Ruether via email at [thomas.ruether@csiro.au](mailto:thomas.ruether@csiro.au) |
| 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](mailto:careers.online@csiro.au) or call 1300 984 220. |

### 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 Electrical Engineer will work across a multidisciplinary team within the ‘Thermal and Electrochemical Technologies’ Group in the CSIRO Energy Technologies program. The group executes research & development in the areas of battery storage, hydrogen related technologies, biomass gasification processes, and renewable fuels-based IC engines.

The Electrical Engineer will lead and conduct the development, construction and testing of electronic hardware for specific battery and hybrid energy systems. More specifically, they will be breadboarding electronic designs, evaluating the designs for the intended applications and finally construct and experimentally test respective prototype units. They will also play a key role in the testing and evaluation of battery and other energy storage technologies for performance. A further important aspect of this position is the collation, analysis and documentation of results to assist senior scientists with preparation of reports and publications. They will manage the laboratory day-to-day operations and ensure equipment is maintained. The Electrical Engineer will also take an active role in the larger team and support a multidisciplinary research team by assisting with different experimental activities with all appropriate training to be provided.

Applications are invited across two capability levels and the successful candidate will be appointed at the level commensurate with their skills and experience.

### Duties and Key Result Areas:

* Contribute to system prototype and hardware construction including breadboarding designs, construction of electronic systems, testing and evaluation.
* Under minimal supervision, setup hardware and connections of energy storage systems and laboratory (custom designed or existing) equipment.
* Coding of test procedures for laboratory equipment.
* Conduct the testing and evaluation of batteries and/or energy storage systems and prototype system.
* Contribute to data analysis and tabulation/plotting to support senior scientists.
* Write safe working instructions (SWI) and preventive maintenance schedules for the safe operation of laboratory equipment.
* Manage the laboratory day-to-day operations, laboratory maintenance and upkeep including equipment maintenance and coordination.
* Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work as part of a multi-disciplinary, often regionally dispersed research team, to carry out tasks under limited direction in support of scientific research.
* Work collaboratively with colleagues within your team, the business unit and across CSIRO, to reach objectives.
* Provide instructions on activities pertaining to the immediate work area and responsibilities, as required.
* Adapt and/or develop original experimental methods/equipment/software/concepts/ ideas in support of existing and further research.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

**For appointment at the higher salary level (CSOF5), duties will include:**

* Lead a small team and/or collaborate with staff from other teams in meeting their objectives as required.
* Initiate and maintain collaborative relationships with external researchers and experts, manage contracts and transfer technology to industry.
* Participate in work which is highly involved because of the unique or unusual features and complications, requiring the design & development of original technologies and/or the development of original experimental techniques and insightful interpretation of data.
* Participate in project scoping and planning, making significant contributions to the technological direction.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **CSOF 5 Additional Competencies:**

* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.

## **Selection Criteria**

#### Essential

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

1. Relevant trade certificate/diploma/bachelor’s degree or equivalent relevant work experience in Electrical Engineering and electrical systems.
2. A valid licence to carry out electrical work.
3. A demonstrated understanding of electrical control systems such as PLC, HMI, battery management systems (BMS), micro controller programming etc.
4. In relation to 2 and 3, demonstrated proficiency with various equipment and software such as (or equivalent) Altium Designer, Automation Organiser, Arduino IDE, Visio Professional, etc.
5. Demonstrated experience with prototype construction and electrical systems testing.
6. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks under general direction from Scientific Researchers.
7. The ability & willingness to contribute novel ideas and approaches in support of scientific investigations.

## **Desirable**

1. Demonstrated experience working with batteries, solar PV, micro-wind or fuel cells testing/operation.
2. Experience with high precision analytical equipment.

## **For appointment at the higher salary level (CSOF5), the additional criteria will also include:**

## **Essential**

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

1. High levels of initiative, ingenuity and skills to solve complex technological problems.
2. Independence in identifying and characterising technological challenges.
3. Experience in leading a (small) team of people with varying skills and backgrounds.

## **Desirable**

1. Experience in liaising with clients.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.

**CSIRO Energy** is pioneering low-emission technologies that create value for industry and households and provide the knowledge which will help guide Australia towards a smart, secure energy future.

Find out more about CSIRO [Energy](https://www.csiro.au/en/Research/EF)