# Position Details

## Research Projects- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Research Electrical/Mechatronics Engineer |
| Job Reference | 96232 |
| Tenure | Specified Term of 3 years  Full-time (flexible work arrangements may be considered) |
| Salary Range | AU $93,267 – AU$105,517 per annum plus up to 15.4% superannuation |
| Location(s) | Newcastle, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian or New Zealand Citizens * Australian Permanent Residents * Australian Temporary Residents, currently residing in Australia, with an existing valid visa and unrestricted work rights for the duration of the term (at least until June 2027) and **no requirement for visa sponsorship from CSIRO**. Please note this does not include bridging visas or other visas that are dependent upon the approval of future visas. |
| Position reports to the | Team Leader, Transport Electrification |
| Client Focus – Internal | 70% |
| Client Focus – External | 30% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Kate Cavanagh via email at [kate.cavanagh@csiro.au](mailto:kate.cavanagh@csiro.au) or phone +61 2 4960 6208 |
| 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. |

**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 Research Electrical/Mechatronic Engineer will be part of the ‘Transport Electrification’ team within CSIRO’s wider Energy Systems program. The team specialises in investigating transport electrification and integration into Australian electricity systems. Having software and hardware engineering capability is desirable for operation and trouble-shooting equipment procedures. Currently, all projects in the program require data in some capacity, and unlocking the value of this data requires data analytics and data science. Implementing this data into workflows that can produce consistent research and be used in an operational capacity involves hardware and software electrical engineering experience.

The Research Electrical/Mechatronic Engineer in this position will assist the Program through their hardware and software integration experience, experimental research, data science and software engineering capacity. Specifically, they will be assisting three key aspects of the program:

* **Assessment of Plugin Electric Vehicle (PEV) Grid Impacts and Transport Electrification** – The Systems Program requires unique electrical engineering skills, such as data manipulation and analysis, software engineering, and system hardware integration, ideally with experience in the PEV domain.
* **Charging communication protocol** – supervising and managing several students in vehicle charging protocol, which is a key component to the sector discussion for infrastructure requirements.
* **Vehicle-to-Grid (V2G) integration** – contributing to further capability development and project work enabling and operating V2G integration.

### Duties and Key Result Areas

* Design and conduct experiments for electric vehicle hardware and software.
* Resource management and procurement of hardware and software to support infrastructure and equipment in CSIRO laboratories for electric vehicles.
* Report CSIRO’s innovative science in ways that meet clients, industry and key stakeholder expectations.
* Contribute to solving challenges for grid and charging infrastructure to accelerate transport electrification in Australia.
* Under general direction, contribute to research and/or technology through the development of original and adapted experimental methods, equipment or software.
* Undertake a wide variety of tasks or tasks with a high degree of specialisation.
* Show initiative to seek new approaches to meet experimental or technological needs when encountering new problems where methods are not defined.
* Participate in the identification and definition of research and/or technological problems with colleagues.
* Liaise with clients to determine their needs and take personal responsibility for their satisfaction.
* Address problems promptly and in a constructive manner.
* Participate in planning projects and accept responsibility for scheduling and completion of major parts of the project, including evaluation of options, experimental design, data collection and analysis, user and customer research, user experience and/or software design, implementation and delivery,
* Make significant contributions to the interpretation and communication of research or technological results and may collaborate on drafting presentations to, and/or detailed written reports for, clients and the scientific and/or technology community.
* 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, regionally dispersed research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. Relevant trade certificate/diploma/bachelor’s degree and/or equivalent relevant work experience in electronics or mechatronics engineering.
2. Demonstrated professional engineering experience deploying electrical or mechatronic engineering concepts for real-world projects.
3. Strong communication skills, both orally and in writing, offering factual information supported by data, definitions, examples, illustrations or other aids.
4. Demonstrated problem solving skills, and ability to investigate the underlying issues of complex and ill-defined problems, and develop appropriate responses by adapting/creating and testing alternative solutions.
5. Demonstrated ability to work agilely and effectively as part of both large and small multi-disciplinary teams, and willingness to proactively seek and consider the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.

## **Desirable**

1. Experience working with electrical vehicles or associated infrastructure.
2. Experience with programming skills and languages such as Python programming.

## **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.

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 undertake a pre-employment background check. Please note that individuals 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