# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Electrical Power Systems Research Engineer |
| Job Reference | 92124 |
| Tenure | Indefinite, Full-time |
| Salary Range | AU$105k - AU$114k per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Newcastle, NSW preferred. Melbourne, Brisbane, Perth or other sites with an Energy team presence may be considered. |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates (visa sponsorship may be provided to the successful candidate if required) |
| Position reports to the | Team Leader Power Systems |
| Client Focus – Internal | 40% |
| Client Focus – External | 60% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Thomas Brinsmead via email at thomas.brinsmead@csiro.au or phone +61 2 4960 6143 |
| 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).

### Role Overview

The role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You will be required to contribute to applied research activities in electrical power systems and energy network modelling and control, working with a range of partners to take the latest optimisation, simulation and analytical techniques to impact the growth of Australia’s electricity system. You will have the opportunity to build and maintain international networks of research collaborators and deployment partners and pursue new ideas and approaches that create new concepts.

### Duties and Key Result Areas

* Conduct modelling and simulation studies of Australia’s current and next-generation electricity generation, transmission and distribution systems (in near real-time and longer-term timeframes).
* Develop approaches and techniques for solving grid challenges associated with renewable energy integration, managing battery systems or distributed energy resources. Deploy and test these techniques in real-world, large scale deployments.  
  A focus of these positions will be the multi-year program [Global Power Systems Transformation](https://www.csiro.au/en/research/technology-space/energy/g-pst-research-roadmap). The successful candidate will be heavily engaged in delivering this work.
* Interact and collaborate with diverse industrial and research partners, including network service providers, universities, energy market and power system operators, start-up companies, and others.
* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* 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.

*CSIRO requires National Police Checks to be provided by preferred applicants for all new positions. Where matters are disclosed in a National Police Check, only those that are relevant to the position and the ability of the applicant to perform the role will be taken into account.*

## **Selection Criteria**

#### Essential

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

1. Bachelor’s degree and/or PhD or equivalent relevant work experience in Engineering, Mathematics, or related fields, with a focus on power system engineering, modelling, planning, optimisation or control.
2. Experience in electrical generation/distribution/transmission system modelling, planning, optimisation or control.
3. An enthusiasm for applied research solving current problems for commercial partners.

## **Desirable**

1. Experience in one or more of the nine research topic areas identified in the [CSIRO GPST Roadmap for Australia](https://www.csiro.au/en/research/technology-space/energy/g-pst-research-roadmap) *(Applicants are strongly encouraged to highlight how their previous professional experience relates to addressing one or more of the nine research topics identified as high priority in the CSIRO GPST Roadmap for Australia, or less specifically, how it relates to solving grid challenges associated with renewable energy integration).*
2. A track record of quality scientific publications.
3. A PhD in Electrical Engineering.
4. Previous experience with power system modelling tools, such as SINCAL, PowerFactory, OpenDSS, PSCAD.
5. Experience with programming/analysis tools, such as Python, Matlab, R, or Julia PowerModels.

## **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 responses 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.
* **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 change.

Special Requirements

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test- https://ielts.com.au/)

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and <https://www.csiro.au/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