# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Electrical Power Systems Research Engineer |
| Job Reference | 92125 |
| Tenure | Indefinite, Full-time |
| Salary Range | AU$121k - AU$142k 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.
* Contribute to setting priorities and new directions in research for Australia’s power systems including the grid challenges associated with renewable energy integration.  
  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 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. An enthusiasm for applied research solving current problems for commercial partners.
3. Experience in electrical generation/distribution/transmission system modelling, planning, optimisation or control.

**Desirable**

1. Experience planning and leading successful research projects, including collaborations between academia and industry.
2. Experience supervising project teams and junior staff.
3. A track record of quality scientific publications.
4. 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 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).*
5. A PhD in Electrical Engineering.
6. Previous experience with power system modelling tools, such as SINCAL, PowerFactory, OpenDSS, PSCAD.
7. 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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **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:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

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.

* 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