# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Electrical Power Systems Researcher |
| Job Reference | 64343 |
| Tenure | Specified Term of 36 monthsFull-time  |
| Salary Range | AU$98,735 to AU$106,848 pa + up to 15.4% superannuation |
| Location(s) | Newcastle, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Cluster Leader, Grids |
| Client Focus – Internal | 40% |
| Client Focus – External | 60% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact John Ward via email at john.k.ward@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 or call 1300 984 220. |

### Role Overview

The role of research science & engineering staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You will be engaged in scientific activity ranging from fundamental research to major projects directly solving problems for our industrial partners. 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.
* Interact and collaborate with diverse industrial and research partners, including network service providers, universities, energy market 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.

## **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:** 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 changes.

## **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 or Mathematics, with a focus on power system modelling, optimisation or control
2. Experience in electrical generation/distribution/transmission system modelling or optimisation and control
3. An enthusiasm for applied research solving current problems for commercial partners.

## **Desirable:**

1. A PhD in Electrical Engineering
2. Previous experience with power system modelling tools, such as SINCAL, PowerFactory, OpenDSS
3. Background in applying optimisation and control techniques to electrical power systems
4. Experience with programming/analysis tools, such as Python, Matlab, R, Julia PowerModels
5. Extensive publication history.

Special Requirements

Appointment to this role may be subject to the following condition:

* 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. To find out more visit us [online](http://www.csiro.au/)!

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