# Position Details

## Research Scientist/Engineer- CSOF7

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| The following information is for applicants | |
| Advertised Job Title | Senior Electrical Power Systems Researcher |
| Job Reference | 64410 |
| Tenure | Specified Term of 36 months (Full-time) |
| Salary Range | AU$136,437 to AU$150,956 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 | * Australian Citizens and Permanent Residents * New Zealand Citizens who usually reside in Australia * Australian temporary residents who are currently residing in Australia (visa sponsorship may be provided to eligible candidates) |
| Position reports to the | Cluster Leader, Grids |
| Client Focus – Internal | 40% |
| Client Focus – External | 60% |
| Number of Direct Reports | To be confirmed |
| 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](mailto: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 lead 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, play a lead role in securing project funds, and pursue new ideas and approaches that create new concepts.

### Duties and Key Result Areas:

* Take a leading role in the design and development of 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.
* Lead and mentor junior research staff.
* Communicate research results to clients and the scientific community through oral and written reports.
* Provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* 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:** Creates and fosters an environment in which there is a high level of cooperation within and between teams. Facilitates positive team relationships to build interactions across Business Units and the organisation.
* **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:** Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes.
* **Judgement and Problem Solving:** Resolves major conceptual scientific, technical, commercial or management problems, which have a significant impact upon the field of research, professional function, the Business Unit or the Organisation. Situations faced have little or no precedent and require original concepts and approaches.
* **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:**Is flexible in response to external change or when faced with external constraints. Identifies and promotes the opportunities arising as a result of change.

## **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. Extensive 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. Power system planning experience with a utility or similar.
2. Expertise in electromechanical and/or electromagnetic transient simulation of power systems, e.g. in tools such as PSCAD, EMTP-RV, PSS/E, PSS/SINCAL, or Digsilent PowerFactory.
3. Experience in real-time simulation (software or hardware-in-the-loop) using Opal-RT or RTDS RSCAD.
4. Experience in the application of optimisation and control techniques to electrical power systems.
5. History of planning and leading successful research projects, including collaborations across industry/academia.
6. Track record of quality scientific publications.
7. Demonstrated success supervising junior engineers or research staff.

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)