# Position Details

## Research Projects – CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Engineer – Mechanical/Process/Thermal Engineering |
| Job Reference | 100428 |
| Tenure and work schedule | Indefinite  Full-time (preferred)  *We will explore options for part-time and flexible work arrangements based on needs of the role and individual circumstances.* |
| Salary Range | AU$131,113 – AU$153,639 per annum (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) and office arrangements | Newcastle, NSW  *Flexible work options available* |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents only |
| Position reports to the | Team Leader, Solar Thermal Engineering |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Noel Duffy (Group Leader – Solar Technologies) via email at [noel.duffy@csiro.au](mailto:noel.duffy@csiro.au) or phone +61 3 9545 7828 |
| Support and workplace adjustments | We offer a range of reasonable supports and workplace adjustments. Please let us know via email at [Vicki.Ferrar@csiro.au](mailto:Vicki.Ferrar@csiro.au) (Vicki Ferrar – Talent Acquisition Partner) if we can help you to equitably participate in our recruitment process or the role itself. |
| 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) |

**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).

### About CSIRO

As Australia's national science agency, CSIRO is solving the greatest challenges through innovative science and technology. Many of our iconic innovations were once considered impossible until someone, just like you, joined us and took on the challenge.

As one of the world’s largest multidisciplinary mission-driven research organisations, we are focused on the issues that matter the most: for our quality of life, for the economy and for our environment. We believe diverse teams are more effective and deliver more innovative outcomes. When we all focus on the big things that really matter, and work in partnership with our communities and [Indigenous Australia](https://www.csiro.au/research/indigenous-science), Australian science and technology can solve seemingly impossible problems and create new value for all Australians. Visit [CSIRO.au](https://www.csiro.au/) for more information.

### 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. At senior levels, Research Projects staff may be involved in providing consulting services, science and technology management and/or industry liaison.

The Senior Research Engineer will be part of CSIRO’s Solar Thermal Engineering team, a multi-disciplinary group based in Newcastle comprising scientists, engineers, and economists. The team undertakes applied research and development to advance renewable energy technologies, with a focus on addressing industry challenges, supporting decarbonisation, and contributing to a more affordable and sustainable energy future.

The Senior Research Engineer will contribute to the delivery of complex, multi-faceted projects involving large industry partners and national & international research collaborators. The position requires the application of specialist engineering knowledge to develop and implement practical solutions across diverse problem spaces. It is well suited to an individual who is motivated by technical complexity, interdisciplinary work, and fast-paced project environments.

The successful candidate will bring strong project management capabilities and a track record in the design and commissioning of mechanical systems. Core technical expertise in systems control and/or thermal process management is essential, along with the ability to lead small teams, engage effectively with clients, and drive the delivery of process plant development activities.

### Duties and Key Result Areas

* Lead and oversee the development and execution of experimental and process plant projects, ensuring timely delivery within budget and scope.
* Act as a trusted advisor and the primary point of contact for clients, fostering strong relationships and ensuring effective communication throughout the project lifecycle.
* Drive business development by identifying opportunities and engaging with key stakeholders.
* Develop experimental test apparatus and process plant designs, with a particular focus on high-temperature applications.
* Design heat exchangers and high-temperature process components while ensuring adherence to engineering best practices.
* Design, prototype, and implement mechanical and automated components and systems.
* Lead commissioning activities and oversee onsite operations as needed.
* Utilise common engineering design tools, such as CAD software, and apply computational methods and analysis tools, including finite element analysis (FEA), to optimise designs.
* Provide leadership and supervision to engineering staff, ensuring research designs are implemented accurately and that experiments are executed efficiently.
* Lead, coach/mentor and manage team members to ensure successful completion of project work, and foster a collaborative, results-oriented work environment.
* Oversee the safe and efficient operation of experimental and process plant environments, adhering to health and safety standards and ensuring compliance with regulatory requirements.
* Grow CSIRO’s reputation as the go-to organization for solving deep technical challenges in the large-scale wind, solar and storage domain.
* Communicate CSIRO’s technical and industry-focused work across a range of audiences, from technical forums to the broader 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. A tertiary degree and/or equivalent technical experience in a relevant engineering field, such as Mechanical, Chemical, Mechatronics or related discipline.
2. Significant demonstrated experience in systems control designing, commissioning, and onsite operations.
3. **Excellent written and oral communication skills, evidenced by high-level reporting, presentation and negotiation abilities, and the capacity to identify and influence critical stakeholders to gain support for contentious proposals/ideas.**
4. Demonstrated expertise in developing prototype test setups and/or process plant systems, and experience in designing control systems (e.g. heliostats) and/or high-temperature process applications.
5. Proficiency with CAD software and digital simulation, including FEA and/or CFD.
6. Demonstrated experience in managing complex engineering projects, from planning and development through to successful delivery.
7. Strong leadership abilities, with proven ability to supervise and develop engineering teams.
8. Strong organizational abilities, with keen attention to detail and the capacity to manage multiple projects simultaneously.

## **Desirable**

1. Knowledge of high-temperature thermo-optical concentrator systems (e.g. heliostats), or experience in heat and mass transfer systems.
2. Demonstrated people leadership skills with ability to effectively manage a **multi-disciplinary research and development team to achieve organisational goals.**
3. A demonstrated commitment to fostering a safe and inclusive work environment.

## **Not sure if you meet all the criteria?**

While it is CSIRO policy that the successful candidate must meet all the essential criteria, there are many ways to demonstrate this. Don’t let the list discourage you. If you are unsure about applying, please reach out to the contact on page 1 of this document so we can discuss the role further.

## **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 team 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, goals and priorities.

## **Setting you up for success**

We understand that not everyone works in the same way and sometimes people may require reasonable support and adjustments to perform at their best. Whether related to the recruitment process and or the role itself, this may include options such as providing different methods of communication, flexible hours or physical adjustments to work methods. If you feel comfortable, we encourage you to share any support and adjustments you may need to carry out the inherent requirements of the role. Please let us know via email [Vicki.Ferrar@csiro.au](mailto:Vicki.Ferrar@csiro.au) (Vicki Ferrar – Talent Acquisition Partner) if we can help you to equitably participate in our recruitment process or the role itself.

## **Life at CSIRO and flexible working arrangements**

We [work flexibly at CSIRO](https://www.csiro.au/en/careers/life-at-csiro/Flexible-work), offering a range of options for how, when and where you work.  We can discuss flexible work arrangements with you during the recruitment process. CSIRO also offers a range of leave entitlements, [benefits](https://www.csiro.au/en/careers/life-at-csiro/Benefits) and [career development](https://www.csiro.au/en/careers/life-at-csiro/Career-development) opportunities. To learn more, visit [Careers at CSIRO](https://www.csiro.au/en/careers).

We celebrate the uniqueness of our workforce and are committed to creating [diverse and inclusive teams](https://www.csiro.au/en/careers/life-at-csiro/Diversity-inclusion-belonging) where everyone feels they belong. CSIRO is an equal employment opportunity organisation dedicated to recruiting people based on merit, and reflecting the diversity of the community we serve. We recognise true diversity encompasses all ages, nationalities, abilities, cultures, genders, sexualities, faiths, levels of education, diversity of thought and many more aspects of identity. By empowering diverse teams, our community is reflected in the solutions we create.

## **CSIRO values**

CSIRO is a values-based organisation committed to values-based leadership.

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| **Value** | **Descriptor** | **Behaviour** |
| **People first** | Our priority is the safety and wellbeing of our people. We believe in, and respect, the power of diverse perspectives. We seek out and learn from our differences. | * Respectful * Caring * Inclusive |
| **Further together** | We achieve more together than we ever could alone. We listen and collaborate, in teams, across disciplines, across boundaries. We embrace ambiguity and use discussion and persistence to generate unique solutions to complex problems. | * Accountable * Authentic * Courageous |
| **Making it real** | We do science with real impact. We thrive when taking on the big challenges facing the world. We take educated risks and defy convention. We celebrate successes and failures and leverage them to learn as we strive to be the force for positive change. | * Partnering * Cooperative * Humble |
| **Trusted** | We’re driven by purpose but remain objective. We fight misinformation with facts. We earn trust everywhere through everything we do. We trust each other and we hold each other accountable. Together our actions drive Australia’s trust in CSIRO. | * Curious * Adaptive * Entrepreneurial |

## **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).

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.