# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Scientist – Flowsheeting and Techno-economic Modelling |
| Job Reference | 81065 |
| Tenure | Indefinite  Full-time |
| Salary Range | AU$117,917 to AU$138,176 pa + up to 15.4% superannuation |
| Location(s) | Melbourne (Clayton), VIC |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian or New Zealand Citizens currently residing in Australia * Australian Permanent Residents currently residing in Australia |
| Position reports to the | Team Leader, Electrochemical Energy Systems |
| Client Focus – Internal | 60% |
| Client Focus – External | 40% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Nawshad Haque via email [nawshad.haque@csiro.au](mailto:nawshad.haque@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. |

### Acknowledgement of Country

CSIRO acknowledges the Traditional Owners of the land, sea, and waters, of the area 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 in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

Based at CSIRO’s Clayton site, the Senior Research Scientist will be a part of the Energy Technologies program and will work on a range of applied research projects. The focus of this role is electrochemical energy systems for the production of renewable fuels such as hydrogen, ammonia and low emissions energy applications. In addition to being an important member of the wider team, this role will also have responsibilities in external engagement and project development activities. The Senior Research Scientist will be expected to develop their own research domain to augment and grow CSIRO’s capabilities in the priority areas.

### Duties and Key Result Areas:

* Develop, design and deliver client-focussed research projects, or components of large-scale research initiatives.
* Work as part of the wider research group on key modelling or experimental aspects of research projects.
* Contribute to, and possibly lead, the production of client reports and scientific papers.
* Engage externally to ensure that our research priorities are aligned with industrial needs.
* Act as a trusted advisor, utilising knowledge of client’s business and understanding of their underlying needs.
* Anticipate industry and/or community needs and market direction through client liaison/networking and identify and adapt quickly to changes.
* Within broad guidelines, use professional expertise, knowledge of other disciplines and research experience/achievement to formulate, develop and complete an approved research program with general direction as to the aims of their activities.
* Communicate research results to clients and the scientific community through oral and written reports, which may include the preparation of documents for patent applications.
* Provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* Lead and supervise staff to ensure that experiments are established in accordance with the research design and are completed within the agree timeframes and budget.
* Undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.
* 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, 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 procedures and policy, Diversity initiatives and Making Safety Personal 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:** 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.

## **Selection Criteria**

#### Essential

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

1. A PhD in Chemical Engineering, with a strong background in ASPEN software skills and techno-economic evaluation backed with substantial previous experience and publication record in the relevant field*.*
2. Sound working knowledge of flowsheeting, material and energy balances, sizing and costing of process equipment, new conceptual flowsheet development and evaluation techniques for hydrogen energy technologies.
3. Experience with establishing new experimental setup and undertaking or supervising experimental test work in the laboratory.
4. Established reputation, network and experience in relevant fields associated with chemical processing and energy technologies.
5. A track record of developing and delivering large client-focussed research projects, with demonstrated project management skills.

**Desirable:**

1. Ability to contribute to design of research equipment and systems, and to conduct HAZOP analysis on major laboratory and pilot scale research rigs.
2. Experience in understanding of electrochemical reactors such as solid oxide electrolysis and fuel cells and understanding of cost databases and cost index concepts for equipment.
3. Demonstrated commitment to effective risk management processes and procedures across all areas of workplace operations.
4. Demonstrated experience in development and presentation of strategic and technical proposals, project reports, conference papers and presentations for a range of relevant industry, research, and community stakeholders.

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 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/)!

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted

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