# Position Details

## Technical Services - CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Licensed Electrician – SKA-Low Telescope (SKA-Low) |
| Job Reference | 83681 |
| Tenure | Indefinite  Full-time, job-share or part-time (minimum 60 hours per fortnight) |
| Salary Range | AU$102k - AU$111k pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Geraldton, Western Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian or New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | SKA-Low Site Manager |
| Number of Direct Reports | 0 |
| Enquire about this job | Mark Bennett, SKA-Low Site Manager [Mark.Bennett@skao.int](mailto:Mark.Bennett@skao.int) |
| 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, in 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).

## **The CSIRO Experience**

As an employee of CSIRO, you will be eligible for the many benefits of working at Australia’s National Science Agency. You can read more here:

1. [Life at CSIRO](https://www.csiro.au/en/careers/life-at-csiro)
2. [Personal Development & Learning](https://www.csiro.au/en/careers/life-at-csiro/Career-development)
3. [Generous Leave & Conditions](https://www.csiro.au/en/careers/life-at-csiro/Generous-leave-conditions)
4. [Work / Life Balance](https://www.csiro.au/en/careers/life-at-csiro/Balance)

## **Background**

The SKA Observatory is a next-generation global radio astronomy facility that will revolutionise our understanding of the Universe and the laws of fundamental physics. It is one observatory with two telescopes: SKA-Low in Western Australia and SKA-Mid in South Africa. Australia is a co-host member of the SKA Observatory, an intergovernmental organisation headquartered at Jodrell Bank, near Manchester in the United Kingdom, responsible for SKA Observatory construction and operation globally.

Among the major science goals for the first phase will be to study the history and role of neutral Hydrogen in the Universe from the dark ages to the present-day, and to employ pulsars as probes of fundamental physics.

The first phase of the SKA will consist of two telescopes:

* Australia will host the low-frequency telescope. SKA-Low will comprise up to 131,072 antennas in clusters along spiral arms spanning 65km at CSIRO’s Murchison Radio-astronomy Observatory (MRO) in Western Australia. SKA-Low will receive signals from 50MHz to 350MHz
* South Africa will host the mid-frequency telescope. SKA-Mid will comprise up to 197 dishes spread along spiral arms spanning 150km. SKA-Mid will receive signals from 70MHz to 10GHz

CSIRO is involved in several facets of the SKA-Low in Australia:

* Operating partner: The SKA Observatory will partner with CSIRO to operate the SKA-Low Telescope and support construction
* Construction: CSIRO has been allocated work in digital processing, infrastructure, and antenna station management and deployment, integration and verification, and software

CSIRO also operates the Murchison Radio-astronomy Observatory which hosts multiple national and international radio astronomy telescopes and is where the SKA-Low Telescope will be located. CSIRO is responsible for land management, subleases, maintaining radio quiet protections, provision of services to the telescopes, and managing the Indigenous Land Use Agreement.

Further Reading: [SKA Phase 1 Executive Summary](https://www.skatelescope.org/wp-content/uploads/2021/03/22380_SKA_Project-Summary_v4_single-pages.pdf).

### Role Overview

Based at the Engineering Operations Centre in Geraldton, with significant time spent onsite at the Murchison Radio-astronomy Observatory, the SKA-Low Licensed Electrician will perform scheduled and unscheduled electrical maintenance of the SKA-Low Telescope and associated site infrastructure, as well as performing high voltage switching operations according to site procedures as required.

The position will maintain reports using SKAO’s state-of-the-art software management tools and databases, ensuring all work is performed in accordance with the organisation’s safety manuals and associated policies / procedures.

Most of the work will be undertaken at the telescope site, and will have additional interactions with stakeholders and staff in Geraldton. The site has comfortable accommodation facilities, and will soon have a purpose built construction camp. Transport to the site is via charter flight or driving.

CSIRO and the SKA Observatory value and respect difference and we are committed to building an inclusive culture by creating an environment where you can balance a successful career with your commitments and interests outside of work. We believe that you will do your best at work if you have a work / life balance and we will work with you to structure the role in a way which supports you.

### Duties and Key Result Areas

* Undertake installation, commissioning, maintenance, and equipment upgrades across a range of industrial electrical and electronic systems.
* Perform the role of electrical nominee for the SKA site (requires relevant licence or ability to gain).
* Maintain accurate maintenance logs, electrical drawings and documentation.
* Communicate with and influence stakeholders, both internal and external, in electrical regulations and requirements relevant to the infrastructure at the EOC and the SKA-Low antenna installation site.
* Supervise electrical contractors as required when working at the site and provide guidance to junior SKA-Low electrical team members.
* Schedule work to meet future demand and use discretion to decide on required methods and approaches.
* Participate in the after-hours on-call system, attend to after-hours breakdowns and work flexible hours as required.
* Ensure test equipment, electrical spares and components, consumables and other workshop equipment are well stocked and maintained.
* Liaise with Science and Astronomy staff from other observatories to provide assistance and undertake collaborative projects as required.
* Communicate openly, effectively, and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of the SKA Observatory and CSIRO’s reputation.
* Work collaboratively as part of a professional regionally and internationally dispersed team.
* Adhere to the spirit and practice of both the SKA Observatory and CSIRO’s values as well as the Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who can demonstrate how they can meet the essential criteria may be appointed.*

1. Relevant trade qualification for an Electrician (unrestricted WA Electrical Licence, or ability to obtain), with High Voltage Switching qualification and experience.
2. Proven ability to work safely and effectively as part of a small engineering team with minimal supervision.
3. Practical knowledge of the design and installation and relevant standards of electrical switchboards and electrical distribution systems.
4. Demonstrated experience planning and conducting the maintenance, repairs, fault finding and diagnosis of electrical systems, including interpretation of drawings.
5. Demonstrated experience using industry relevant software systems i.e., Electrical diagnostic software, SCADA, SAP, Maximo, CITEC, PLC software or similar.

## **Desirable**

1. Industrial experience in the maintenance and operation of a broad range of electrical systems.
2. Experience in maintenance and repair of HVAC systems.
3. Experience in the construction of scientific research facilities.
4. Experience working in remote locations.

## **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:** 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:** 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.

**Special 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.
* Must hold an Australian Class ‘C’ driver’s licence (or equivalent).

**And must be able and willing to:**

* Use or gain the required licence to perform the role of electrical nominee for the SKA site.
* Undertake occasional state and interstate travel.
* Participate in the after-hours on-call system, attend to after-hours breakdowns and work flexible hours as required.

**About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Space and Astronomy](https://www.csiro.au/en/Research/Astronomy) 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

## **About the SKA Observatory**

The SKA Observatory is coordinating a global effort to deliver the largest science facility on the planet. The SKA Observatory will build next-generation radio telescopes that will help to answer key questions in astrophysics, drive technological innovation and support human capital development. Visit [SKA Observatory](https://www.skatelescope.org/) online for more information.

The SKA Observatory’s values are:

* Diversity and Inclusion
* Excellence
* Collaboration
* Creativity and Innovation
* Sustainability